FEBRUARY 57

# MODERN TEXTILES

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES



Alamac's
MAX THAI
brings high
fashion to
knit goods-Story page 35

THE MONTHE STATE FEATURES

Value representation tests

Provides in yard goods



# "NELSON does it again-

Large installation of 'NELSON' rayon spinning machines now ordered by CELULOSA Y DERIVADOS MONTERREY MEXICO

and FINLAND orders additional machines

Finland



Compact and labour saving, simple to operate, easy to maintain—'NELSON' machines are proving themselves daily as the world's finest continuous spinners. 'NELSON' RAYON SPINNING

MACHINES ARE SPINNING

EXTENSIVELY IN ENGLAND AND IN

ELEVEN RAYON PRODUCING

COUNTRIES ABROAD

WE INSTALL A COMPLETE PLANT OR SUPPLY AN INDIVIDUAL MACHINE

DOBSON & BARLOW RAYON MACHINERY SALES LTD BOLTON

MARKETING THE FULL RANGE OF VISCOSE RAYON MANUFACTURED BY DOBSON & BARLOW LTD. BOLTON



# Here's the reason

why Sowco comes II... Sowcotubes Sowcospools D... and other textile paper specialties have become known as "standard of the world" wherever textiles are made! For more than 50 years Sowco has solved the difficult paper carrier problems of the industry... and we're fully equipped and staffed to help you too!



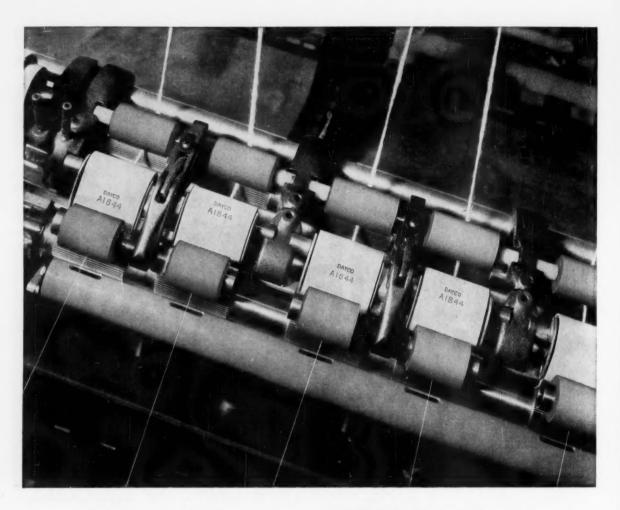
# SONOCO PRODUCTS COMPANY

MAIN OFFICE - HARTSVILLE, S. C.

MYSTIC, CONN. . AKRON, IND. . LOWELL, MASS. . PHILLIPSBURG, N. J

LONGVIEW, TEXAS . PHILADELPHIA, PA. . LOS ANGELES, CA

GRANBY, QUEBEC . BRANTFORD, ONT. . MEXICO, D. F.



# New Dayco EW661 Cot Eliminates 4 causes of lap-ups

**New Dayco Cots stay dry.** Despite near 100% humidity newly perfected EVERGREEN compounds in EW661 Cots defy moisture film. So there is no tendency to hold fibers and cause lap-ups.

New Dayco Cots never become gummy. Even in extremes of heat and humidity new EW661 Cots keep perfect hardness and drawing surface. New EVERGREEN compounds contain nothing to melt under high mill temperatures. No gummy substances to cling to fibers.

New Dayco Cots eliminate surface static. Unlike ordinary synthetic cots new EVERGREEN compounds

dissipate static electricity. Result: no static build-up on cot surface to attract fibers.

**Fibers won't adhere to new Dayco Cots** during shut downs. Monday morning starts are fast, smooth, without a rash of lap-ups. Special compounding makes new Dayco EW661 Cots completely resistant to the action of any oils that might be used on staple fibers.

Take the suggestion of the Dayco Representative who will be in to see you soon. Run a frame of new Dayco EW661 Cots and check the reduction on lap-ups. For immediate facts write The Dayton Rubber Company, Textile Division, 401 S. C. Nat'l. Bank Building, Greenville, S. C.

# Daytom Rubber

@ D. R. 1956

DAYCO AND THOROBRED PRODUCTS FOR BETTER SPINNING AND WEAVING

# MODERN TEXTILES February, 1957 Vol. MAGAZINE\*

#### Modern Textiles Magazine Established 1925

Published Monthly by Rayon Publishing Corporation 303 Fifth Ave., New York 16, N. Y. MUrray Hill 4-0455

	*	
Francis A. Adams		Chairman of the Board
Harvey J Williams		President Vice President
John F D Coffey		Vice President
Harries A. Mumma		Treasurer and Secretary
	*	
Alfred H. McCollough		Publisher
Jerome Campbell		Editor
H. George Janner Robert C. Shook		Managing Editor
Robert C. Shook		Contributing Editor
B. Mori		Contributing Editor
Joseph Fallat		Art Direction
Harvey J. Williams		Business Manager
R. A. Lipscomb		Business Representative
C. E. Peck, Jr.		<b>Business Representative</b>
William Walters		<b>Business Representative</b>
		<b>Business Representative</b>
		Circulation Manager

Subscription Rates: North and South America and U. S. Possassions, one year \$5.00; all other countries, one year, \$8.00. Postage prepaid by the publisher. Single copies (current issue), 60 cents.

Member of Business Publications Audit of Circulation, Inc.

Entered as second-class matter at the Post Office, Manchester, N. H. Editorial and Circulation offices at 303 Fifth Avenue, New York 16, N. Y. Publica-tion offices at 215 Canal Street, Manchester, N. H. (Originally entered as second-class matter at the Post Office, New York, N. Y. August 20, 1925).

Contents copyright 1956 by Rayon Publishing Corporation. All rights reserved. Articles may be reprinted with the written permission of the publisher, if credit is given to Modern Textiles Magazine.

## CONTENTS

### Publisher's Viewpoint

The Long-Range Prospect is Bright	31
Features	
Eastman's New 50 Yarn by J. M. Heape and R. H. Norrell	33
Personality: How Thal Upgrades Knitwear by Jerome Campbell	3.
Mill Test Procedures: VIII Yarn Preparation Tests for Better Weaving by Norbert L. Enrick	39
Ornamentation of Apparel Fabrics: Spot Designs IV	48
Yard Goods Sales-Profits for You?	61
AATT Papers	
Textile Gains in 1956 by J. B. Goldberg	63

### The Principal Trade Groups

Rayon and Acetate Fibers Producers Group......Empire State Bldg., New York American Association of Textile Chemists and Colorists ...... Lowell Techn. Inst., Lowell, Mass. American Association for Textile Technology, Inc.......100 W. 55th St., New York Silk and Rayon Printers and Dyers Ass'n of America, Inc. ......... 1450 Broadway, New York American Rayon Institute 350 Fifth Avenue, New York

#### Departments

Outlook in Textile Marketing — Robert C. Shook	
Report from Europe	
New Machinery — New Equipment	
New Fabrics — New Yarns	
TDI News and Comments	
Report from Japan — B. Mori	
Dyeing and Finishing Notes	~~~~
Yarn Prices	
Textile News Briefs	
Calendar of Coming Events	
Advertisers Index	

<sup>\*</sup> Registered U.S. Pat. Office.

## More Yarn Price Increases

American Enka Corp. recently advanced prices for its nylon filament yarn from four to 25 cents per pound. The increases became effective Dec. 21, 1956. American Enka also increased prices by three cents per pound on its Tempra and Suprenka high tenacity rayon filament yarns, all deniers, effective Jan. 2.

rayon filament yarns, all deniers, effective Jan. 2. American Viscose Corp. raised prices of natural acetate yarns three to five cents per pound effective Dec. 21, 1956. The increases amount to five cents per pound on yarns of 45 to 75 denier inclusive, four cents on yarns of 100 to 120 denier inclusive, and three cents on 150 and 200 denier yarns.

North American Rayon Corp. increased prices of rayon weaving yarns three cents a pound on 200 denier and coarser and five cents on 150 denier and finer yarns, effective Dec. 14, 1956.

Detailed man-made fiber and yarn price lists showing recent price changes will be found in the Price Tables in the rear of this issue.

## **Du Pont Raises Staple Fiber Prices**

Prices of certain deniers of nylon, Dacron polyester fiber and Orlon acrylic fiber were increased recently by the Du Pont Co. The new prices are still 17 to 24 cents a pound below price levels existing on Nov. 22, 1955, when these fibers were reduced 20 to 30 cents, Du Pont pointed out.

The company left prices unchanged on three items in Orlon staple and tow, one item in nylon staple and Dacron polyester fiberfill. The prices of Type 39 Orlon staple fiber, a special product designed for woolen system use, was reduced nine cents a pound.

The company said that contrary to trade rumors it was contemplating no action on nylon and Dacron filament yarn prices at this time.

## **Wool Outlook Brightening**

Last year brought a sharp rise in wool demand and a much brighter long-range outlook for the fiber, members of the Ohio Sheep Improvement Association were told recently by Max F. Schmitt, president of the Wool Bureau, Inc.

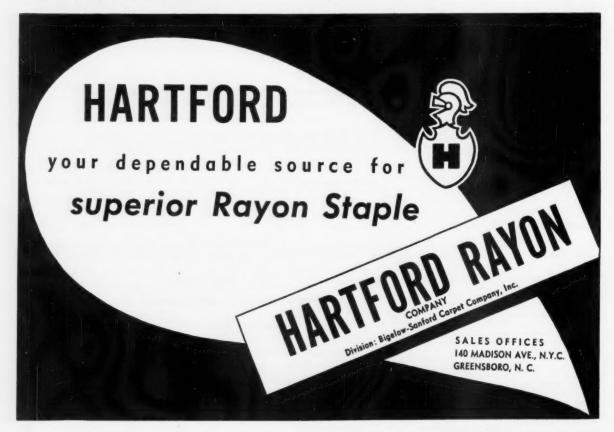
At the association's annual meeting at Columbus, Ohio, Mr. Schmitt said per capita consumption of apparel wool increased 12% as a result of a national wool advertising campaign launched in 1954. Production of wool fabrics for women's fashions rose 21% and the rate for men's clothing had jumped 38%. The current promotion program is designed to increase consumer demand for other products containing wool, Mr. Schmitt stated.

## Saco Buys into Elliott

Saco-Lowell Shops has acquired a minority interest in Elliott Addressing Machine Co. with an option to purchase the remainder of the common stock at a future date. Announcement of the new arrangement was made jointly in November by Malcolm D. Shaffner, president of Saco-Lowell and Harmon P. Elliott, president of the Elliott Co.

The Elliott Addressing Machine Co., founded in 1898 is one of the two largest manufacturers in the world of addressing equipment. Elliott produces over 50 different models ranging from simple imprinters to high-speed addressers with multiple tabulating and statistical analysis functions.

Company headquarters and the main manufacturing plant are located in Cambridge, Mass., with branch factories at Whitman, Mass. and Atlanta, Ga. Company sales offices are located in 64 cities in the United States. Elliott also has plants in Canada and England, and distributing facilities throughout the world.



MORE THAN 21/2
MILLION SPINDLES
NOW EQUIPPED WITH
ROBERTS HIGH DRAFT

# ROBERTS SPINNING

PUBLISHED BY
ROBERTS COMPANY
SANFORD,
NORTH CAROLINA

**VOL. 12** 

SANFORD, NORTH CAROLINA

NO. 2

# MOST BALL BEARINGS USED IN ROBERTS SPINNING FRAMES

The use of ball bearings at many key points of a spinning frame not heretofore found possible has been accomplished in the Roberts M-1 frames.

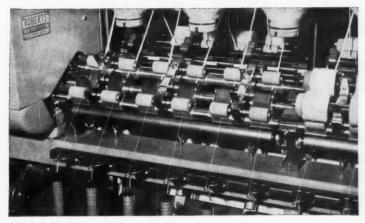
This liberal use of ball bearings results in a spinning frame with smoother performance, greater dependability and freedom from lubrication. The need to replace wearing parts and future maintenance expense is eliminated.

The key points in Roberts Spinning Frames now ball bearing equipped are:

lifting rod rolls
wave shafts
cross shafts
builder motion pivots
crown gear swing arms
complete lay trains
intermediate gears
front roll gears
upright shafts
jack shafts
cylinder bearings
and, of course, in
spindles
tape tension pulleys
top roll suspension system

The long felt desire by practical mill men to apply sealed ball bearings to spinning has been successfully accomplished in the Roberts M-1 Spinning Frames.

# ROBERTS TOP ROLL SUSPENSION USES BALL BEARINGS ALL 3 LINES



A top roll suspension system which uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages has been announced by Roberts Company

## BALL BEARING SPINDLES FIND WIDE ACCEPTANCE

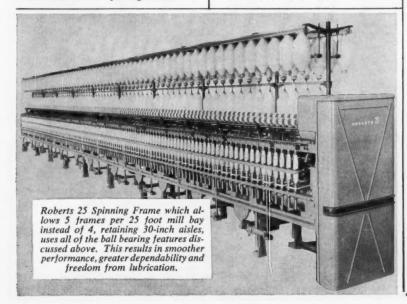
Since early 1956 when Roberts Ball Bearing Spindles were first introduced, several hundred thousand have been installed in spinning frames.

Mill men report their performance exceptionally dependable, even at the highest operating speeds. Adaptable to several drafting systems as well as its own, the Roberts Top Roll Suspension embodies all the following features, many not found in other arrangements:

- Cots are buffed on standard equipment, without attachments.
- Cots revolve together making lap removal simpler.
- Full length revolving clearers are used.
- Front and back rolls are interchangeable making sequence buffing possible.
- All three lines of rolls have doublerow ball bearings.
- 6. Has controlled self-alignment.
- 7. Cots have 1/2" hole diameter.
- 2-piece labyrinth seal is protected from lint entrance and roll picker damage.
- 9. Double row bearing raceways are ground directly into ½" shafts.
- 10. Bearings grease-packed for life.
- Conventional dead-weighting or new spring weighting optional.

An alternative arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts Cap Bars and solid top rolls on middle and back top rolls.

Roberts also continues to offer its No-Oil Cap Bar and Saddle system for all three lines, now installed in more than 2½ million spindles.



## Wide Uses Seen for New Microfibers

Development of organic microfibers by American Viscose Corp. promises to open a new area in textiles especially where highly absorbent fabrics are wanted. Last month American Viscose announced that licenses to make organic microfibers will be offered by the company

According to Dr. Worth Wade, manager of the company's patent development program, the patented process for making microfibers was developed for American Viscose by Arthur D. Little, Inc., Cambridge, Mass. During the past year, the process has been in pilot plant operation at American Viscose's Marcus Hook, Pa., plant.

In the new process, organic plastics such as vinyl, acrylic, nylon, and polyester resins, as well as amorphous materials such as asphalt are melted or dissolved in volatile solvents and then sprayed into an air stream to form super-fine fibers. During the spraying, the microfibers may be mixed with rayon or other fibers and the mixture deposited on a moving belt in random distribution as a web. The microfibers are unique in having a permanent electric charge, irregular length and diameters from 0.5 to 10 microns.

Due to their extreme fineness the microfiber webs are highly absorbent and may be used in sanitary products, sterile absorbent, dentist rolls, inking pads and typewriter ribbons. The static charge on the fibers renders the microfibers, alone or in blends, useful as high efficiency filters for gas, oils, water, dust, and smoke. Uses are foreseen in air conditioning filters, gas masks, and filters for automobiles and trucks. Other possible uses are in non-woven fabrics, insulation layers for sleeping bags and winter clothing.

The microfiber process and apparatus is covered by United States patents 2,483,406; 2,483,405; and also by patents in principal foreign countries. Numerous pat-

ents are pending on important uses. Samples, cost data and market potentials will be made available to domestic and foreign licensees, according to Dr. Wade.

## **Urge Import Reductions**

Immediate action to limit imports of foreign textiles was urged by Col. F. J. Beatty, president of the National Cotton Council. In a telegram to Secretary of Commerce Sinclair Weeks, Col. Beatty said such action was necessary to protect the domestic cotton industry

The NCC, which represents all six branches of the raw cotton industry, adopted a resolution in January, 1956, calling for the U.S. to limit imports of textile manufacturers to a reasonable amount. Col. Beatty said delay of such action has had a demoralizing impact on the whole American textile industry. He added that unless the situation is dealt with adequately, the raw cotton industry has no alternative but to seek remedial action through legislation.

## See Brighter New England Future

"The future will bring a revival of prosperity to New England textile firms," it was forecast by executives of the Fitchburg Yarn Co. marking the firm's 50th anniversary. Frank W. Lyman, president, said he was backing his belief in New England by continually modernizing the plants of Fitchburg and that of its two associate mills, Wachusett Spinning and Watatic Spinning. He said, "our mills not only can and have lived in New England, but they thrive in New England."

Currently Fitchburg and its subsidiaries have 700 workers on their payrolls. The company produces

cotton, synthetic and wool yarns.



# THE WORLD'S MOST EXPERIENCED BUILDERS OF MAN-MADE FIBER PLANTS OFFER

MACHINERY AND COMPLETE PLANTS

FOR THE MANUFACTURE OF

VISCOSE, ACETATE AND SYNTHETIC

YARNS, FIBERS AND FILMS

ENGINEERING, PROCESS AND PRODUCTION KNOW-HOW FOR

RAYON AND NYLON

TEXTILE YARNS

TIRE YARNS

HIGH TENACITY STAPLE AND TOW

HIGH CRIMP STAPLE

SPUN DYED YARNS AND STAPLE

MOISTURE PROOF TRANSPARENT FILMS

Our expert staff and engineering offices located in various parts of the world are at your service to discuss matters of interest with you, whether a complete plant, an addition to your factory, or a single machine. Please write us.

# VON KOHORN INTERNATIONAL CORPORATION

**And Affiliated Companies** 

**Head Office:** 

**Von Kohorn International Building** 

White Plains, N. Y.

**Branches and Offices:** 

New York, Panama, Osaka, Bombay, Zuerich

# 1957 ... the year for Leaders in every phase of the



MR. E. T. BARWICK,

"Nylon carpeting can not only be made to look and feel luxurious, but at the same time it performs admirably in terms of rugged wear. We predict a big year in nylon for 1957."



MR. LOUIS R. PUTZEL, Renard Linoleum and Rug Company

"From our own experience in nylon carpeting, we see every indication that it is headed for a very big future... a future built on true performance and value for the ultimate consumer."







# NYLON in carpeting! carpeting industry agree on nylon



MR. CHARLES A. KARAGHEUSIAN,

"If properly used, the known properties of nylon and the many values it offers the consumer should insure its growth in the manufacture of carpets and rugs."



MR. C. EUGENE STEPHENSON, A.I.D. Internationally famous decorator

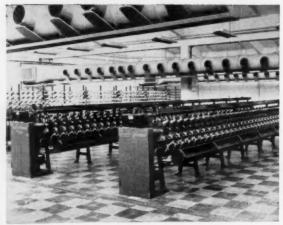
"'Successful interiors' means not only 'beautiful interiors' but also those that stay that way. Nylon carpeting has a way of providing a permanence of beauty that appeals to all practical designers today."

 $\mathbb{R}^{0}$ 

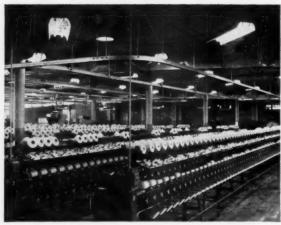
INDUSTRIAL RAYON CORPORATION,

Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Building, Greensboro, N. C.

# Leesona ROTO-CONER° -the winding way around the world



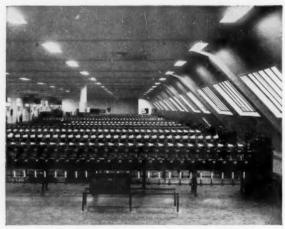
URUGUAY — Roto-Coners set up to wind onto paper cones. Machines are equipped with round bobbin boxes.



U. S. A. — Roto-Coners winding parallel tubes on one side, cones on the other.



**GREAT BRITAIN** — Roto-Coners winding open-wind knitting cones.



FRANCE — Roto-Coners coning 100s — 120s cotton yarn.

Every textile manufacturing country in the world uses Leesona Roto-Coners in quantity.

These quiet, trouble-free drum winders produce every type of open-wind package. They wind onto paper tubes and cones for shipment or knitting . . . onto cork-covered, wood cones for warper creels . . . onto perforated tubes and springs for dyeing . . . onto wood tubes and cones for twisting.

Around the world they wind cottons . . . spun syn-

thetic staples . . . wools . . . worsteds . . . linens . . . blends.

The exclusive Rotary Traverse on these machines eliminates all moving parts connected with reciprocating guides — permits high speed, reduces maintenance, and assures uniform packages and top quality yarn.

For facts and figures on why these versatile, dependable machines are popular around the world, write for the illustrated Leesona Roto-Coner booklet.

23.6.14



# UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Sales Offices: Boston • Philadelphia • Utica • Charlotte • Atlanta • Los Angeles Montreal • Hamilton, Canada

Agents in every principal textile center throughout the world.



Wool and Cupioni® rayon...an item!

Newest fabric blend contains wool for soft, luxurious hand...Cupioni for silken beauty and shantung-type texture...and viscose rayon. It's washable!

Want an early look at this intriguing new fabric? Call LExington 2-3520!



Cupioni® rayon is a product of American Bemberg • Main Office: 261 Fifth Avenue, New York 16, New York • Plant: Elizabethton, Tennessee.



"Acetacell"

"Novocell"

"Plasticell" "Filmcell"

"Tenacell'

For the manufacture of Rayon and Acetate Textile Yarns, High Tenacity Tire Cords, Staple Fibres, Transparent Films, Plastics and other cellulose derivatives.

Quality — Uniformity — Reliability

# RIORDON

SALES CORPORATION LIMITED

SUN LIFE BUILDING

MONTREAL, QUE., CANADA

AND

220 EAST 42nd ST.

NEW YORK, N. Y., U. S. A.



\* New Center Suspension Weighting Unit and New Top Rolls for Spinning Whitin's new UNITROL\*\* Center Suspension Weighting Unit and new top rolls for spinning provides maximum performance and yarn quality combined with new lows in cleaning, maintenance, lubrication and spinning costs. It is standard on Whitin spinning frames and available for change-overs. UNITROL has been thoroughly tested in large mill installations.

- True precision construction
- · Pre-set internal spring weighting
- No levers, saddles or dead weights
- Picking reduced 95 %
- Run out .001" or less
- Whitin anti-friction front rolls; non-lubricated middle and back rolls — all new in design
- Complete lint exclusion and grease retention
- Smoothly streamlined

Write today for complete information

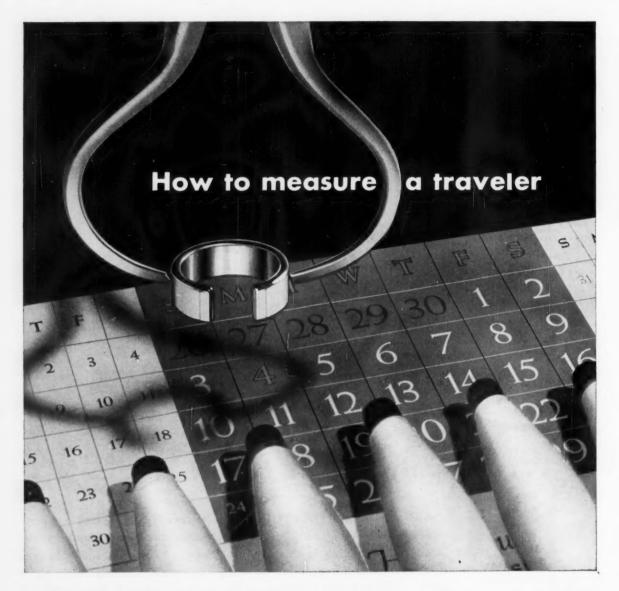
Extens MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

\* \* TRADE MARK

FEBRUARY, 1957



Measure a traveler by days of trouble-free service, and by pounds of first-quality yarn delivered. Travelers vary widely by this test, even though they look alike and meet dimensional specifications.

Under any conditions, you can be sure of maximum production per traveler when you rely on Victor experience and quality control. That's the reason why Victor Travelers are chosen for over 12,000,000 spindles. Mill men everywhere find that Victor quality pays off, consistently, in longer traveler life... with fewer ends down... at higher spinning and twisting speeds.

A Victor Service Engineer will help you select Travelers that measure up to maximum production on any yarn you are running. Write, wire, or phone for prompt service.

# VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I... 20 Mathewson Street . . . . . . Tel. DExter 1-0737 GASTONIA, N. C. . . . 914-916 East Franklin Ave. . . Tel. UNiversity 5-0891





# T33

DETERGENT

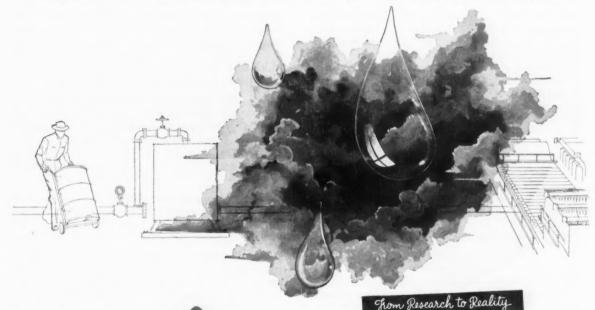
THE EASY-TO-HANDLE LIQUID

IGEPON T-33 is a clear, homogenous liquid which can be shipped and stored in bulk. It requires no dissolving and can be measured out in dippers or pails, or piped

For top performance in textile washing, IGEPON T

from storage tank to point of usage.

has long been the answer. With the introduction of the concentrated liquid form, IGEPON T-33, it is now tops in performance, economy and ease of handling. Ask your Antara representative how IGEPON T-33 can do a real job for you in wool, cotton, or synthetic fiber processing.





ANTARA, CHEMICALS

A SALES DIVISION OF

**GENERAL ANILINE & FILM CORPORATION** 

435 HUDSON STREET . NEW YORK 14, NEW YORK

SALES OFFICES: New York • Boston • Providence • Philadelphia • Charlotte • Chattanooga • Chicago Portland, Ore. • San Francisco • Los Angeles. IN CANADA: Chemical Developments of Canada, Ltd., Montreal

Igepon T-33 manufactured by General Aniline & Film Corporation is sold outside the United States under the trademark "Fenopon T Liquid."

# WITS

# Drying Tenter Combines High Speeds with Fine Finish



# Unique, Single-Jet Drying System Uses Steam-Air Mixture

Two vital needs of today's textile industry—higher production and finer finishes—are now being met by the Vits Universal Tenter. The advanced design of this machine insures complete uniformity in the drying, finishing, curing, polymerizing and direct dyeing of all textile fabrics. It not only improves fabric quality, but does so at much greater speeds—with immediate savings in labor, power consumption and floor space.



**Single-Jet Drying System** provides a completely balanced, high velocity drying focus—eliminating stagnant air zones within the tenter and preventing even the slightest color migration. Axial rather than radial impellers circulate  $3\frac{1}{2}$  to 4 million cu. ft. of air per hour in a two-section, 30 ft. Vits Tenter.

**Steam-Air Mixture** of 65% steam to 35% air at 300 to 400°F. prevents effectively any oxidizing, yellowing, overdrying or weakening of the fabric — eliminates harsh hands on woolens resulting from hot air systems. A single pass dries and cures resin impregnated cottons, dries and heat sets synthetics. Temperature for curing can be raised to 500°F.

Combination Pin and Clip Chain operates with automatic changeover for either application, handles any type of fabric. Chain speeds of 250 yds. per minute are possible without mechanical difficulty.

Other Features—Overfeeds of 40 to 45% • Evaporative capacity of 750 lbs. of water per hour in one section • Specific steam consumption of 1.4 lbs. per lb. of water evaporated • Closed circulation system.

Write for complete information.

COSA TEXTILE DIVISION

Lay-on-air & Tenter Dryers, Padders & Other Finishing Mach. • Spindles • Roller Bearing Inserts • Automatic Moisture Control & Others

COSA CORPORATION, 405 LEXINGTON AVENUE, NEW YORK 17, N. Y....

clip chain link

# Through the Chem-nyle Process

# FILAMENT NYLON BECOMES A FASHION FIBER

As a functional fiber, nylon's superiority is beyond question. Its great strength, durability, resilience... coupled with its easy care have made it a major factor in the textile industry. Yet, nylon's applications in the upper reaches of fashion have been limited by one inherent weakness: "either or" dyeability.

What happens is that under conventional dyeing methods nylon achieves good color uniformity, but at the sacrifice of colorfastness. And conversely, it achieves high fastness, but at the expense of color uniformity. Now Chemstrand research breaks this deadlock with the Chem-nyle Process... a new dyeing technique that brings to continuous filament nylon excellent color uniformity without sacrificing fastness. At one stroke, the whole color picture for nylon changes ... going from plain to brilliant colors, from a narrow to a broad color spectrum.

Through this new dyeing method, filament nylon takes on a dyeability worthy of its other properties.

Now, in addition to its great reputation as a functional fiber, filament nylon also becomes a great fashion fiber!

Think of what this means to you! It means the most imaginative coloring and styling effects can be freely and safely expressed in nylon. It means exciting new fabric constructions, completely new color ranges. Goods dyed by the Chem-nyle Process will have a softer, fuller hand. For the first time in its history, nylon filament yarn will take on new glamour, new drama... new sales appeal! Now shade brilliance, so important in stimulating sales, will be offered to the public in colors never before seen in nylon... colors free of streaks, bars, flashes... colors fast to washing!

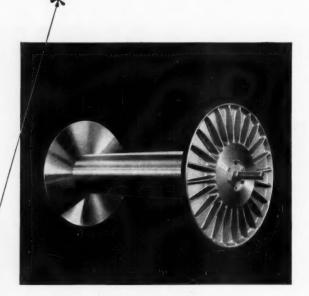
Commercial dyers have been quick to see and seize the tremendous potential offered by the Chemnyle Process. Now the challenge is squarely up to the designers and mills to come up with the new fabric constructions, the fresh colorings made possible by this great new advance in filament nylon dyeing!

# CHEMSTRAND NYLON



THE CHEMSTRAND CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVE., NEW YORK 1 • DISTRICT SALES OFFICES: 3½ Overwood Road, Akron, Ohio; 4 Pearl Street, Dedham, Mass.; 222 South Church Street, Charlotte, N. C. • PLANTS: CHEMSTRAND • NYLON—Pensacola, Fla.; ACRILAN • ACRYLIC FIBER—Decatur, Ala.

Beaming Nylon?



# severe test

proves strength of new HAYES aluminum nylon beam



During load tests on a million-pound testing machine this Hayes Aluminum Nylon Beam withstood a load of 263,000 pounds without failure. With continued loading, the head casting cracked, — even then the beam still held a load of 80,000 pounds, which is considered sufficient for removal of nylon yarn without loss of material. There was no failure of the threads holding head to barrel. Thousands of these beams are now in use for beaming nylon.

The NEW beam is the only aluminum section beam being produced primarily for nylon and includes these features which make it of particular interest to the textile industry:

- available in 30" and 32" head diameters. 541/4" traverse.
- heavy center hub construction, with 24 reinforcing ribs.
- ½" minimum wall, high strength aluminum barrel.
   —adaptable for use with all current makes of warpers.

This beam is merely another instance of Hayes long experience in the manufacture of light weight metal beams. Its greater head strength, increased rigidity, permanent running balance, and glasssmooth, rust-proof surfaces exist in all Hayes beams. Write today for complete information on Hayes beams.

# HAYES INDUSTRIES, INC.

THE WORLD'S LARGEST PRODUCER OF LIGHT METAL BEAMS

Southern Representative: R.E.L. Holt, Jr. & Assoc., Greensboro, N. C.

New England Representative: J. S. Fallow & Co., New Bedford, Mass. Eastern Representative: J. Paul Laird, Philadelphia, Penn.

Canadian Representative:

J. S. Fallow & Co., Montreal, Canada

# FOR FALL...DU PONT WILL PROMOTE SLACKS IN FABRICS OF 55% OR MORE "DACRON" WITH RAYON

To help you sell garments with the benefits consumers expect from "Dacron"\* polyester fiber, Du Pont will put its advertising and promotional efforts behind slacks made of 55% or more "Dacron" with rayon. Properly constructed and finished, gabardines and sheens of these fabrics can provide the wrinkle resistance, the press and shape retention and, in wash 'n' wear constructions, the ease of care that has made "Dacron" so popular in slacks.

As part of this advertising and promotional support, Du Pont has launched a new hang-tag program. Here's the way this program works. Participating mills or converters submit candidate fabrics of "Dacron" with rayon to Du Pont for fiber-content testing by an independent laboratory. Participating garment manufacturers can then obtain free

hang tags directly from Du Pont for all fabrics which have passed this test.

Consumers will read about this new hang tag in Du Pont's national advertising. This tag will thus provide a dramatic tie-in opportunity for participating elements of the trade.

The popularity of these slacks, the salability of their benefits have already been proven. Now, with this new hang-tag program combined with Du Pont's advertising support, slacks made of proven blends of "Dacron" and rayon will be easier to promote, easier to sell. Make plans now to promote these slacks this fall. For full information about the hang-tag program, write: Du Pont, 1315 Grant Avenue, Dept. "T", Wilmington, Delaware.

DRESS RIGHT—you can't afford not to!

# DACRON

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



\*P.S. DACRON is our registered trademark. When you use it: Distinguish it—Capitalize and use quotes or italics, or otherwise distinguish by color, lettering, art work, etc.

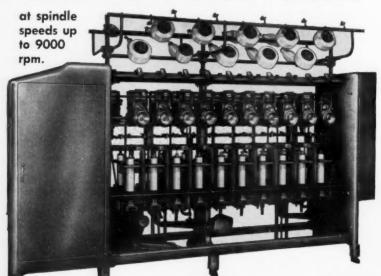
Describe it—Use the phrase "Dacron polyester fiber" at least once in any text. Designate it—As "Du Pont's trademark for its polyester fiber" in a footnate or otherwise.



# you can make all four of these packages on the

NEW U.S. ACME

HIGH SPEED DOUBLER-TWISTER



Yes, you get real package versatility with this newest U. S. ACME-one

Machine sizes from 20 to 100 Spindles

machine that will produce the several package variations shown here! The new U. S. Acme High Speed Doubler-Twister is built on a new unit arrangement to simplify package changes, provide greater stability, higher efficiency, minimum maintenance and lower operating costs.

Speed-wise, this new DOUBLER-TWISTER will give you three times the previous production of any primary twist on zero yarns! It's designed and engineered to handle yarns as low as half-turn-per-inch at spindle speeds up to 9000 in.

The machine features a simplified new feed roll clutch device combined in one unit with dual stop motion controls, drop wires and thread guides. It is equipped with a lint-protected transfer oiling system directly above each feed roll unit. The machine is designed to accommodate any known supply package (for either overend or rotating delivery) and to produce any of the finished packages shown, up to ten-inch traverse. Write or phone for complete information . . .

U. S. TEXTILE MACHINE CO.

Scranton 8, Pa., U. S. A.



designers and manufacturers of
U. S. ACME MODERN THROWING EQUIPMENT



# Which comes firstthe fiber or the use?

One paramount feature of Celanese acetate staple and tow is that they are engineered for your specific needs.

That is the reason for their tremendous range—each length, crimp, denier tailored to distinct end-uses. Each does its job at a competitive price. Each supplies acetate's virtues as you need them-from elegant hand and superb clear color to soft warmth needed in battings.

### ACETATE STAPLE

in 2, 3, 5.5, 8, 12, 17, 35 and 50 individual deniers. 5/8" to 8" length

in Regular Crimp (for woven and knitted goods) in High Crimp (for blankets and carpets)

in Type F (Celacloud—for non-woven battings)

## TOWS

in a full range of individual deniers

#### FLAT FILAMENT ACETATE

(high reflective yarn) available in 35 individual deniers

Celanese®

## CELANESE CORPORATION OF AMERICA

#### BRANCH OFFICES

180 Madison Avenue . . . . . . . . . . . . New York 16, New York 200 Boylston Street . . . . . . . . . . Newton, Massachusetts

#### EXPORT

Amcel Co., Inc. & Pan Amcel Co., Inc., 180 Madison Ave., New York 16

#### IN CANADA

Chemcel, Canadian Chemical & Cellulose Co., Ltd., 2035 Guy St., Montreal

**ACETATE** 



for
successful
dyeing
of
acrilan-wool
blends
by
a
onebath
method ....

The problem of achieving satisfactory union dyeing of Acrilan-wool blends by a one-bath method is solved by DECOMINE, developed by the Arkansas Company for

Chemstrand Corporation.

A balanced cationic and non-ionic auxiliary, Decomine produces dyeings of remarkable uniformity and excellent color values.

Acid, metallized acid, metallized neutral, and chrome colors may be successfully used. However, selected colors of these groups should be used for optimum results.

Our technicians are available to assist in developing formulas for your specific needs.

We acknowledge the helpful cooperation of the Chemstrand Corporation in the development of satisfactory dyeing formulas in the application of Decomine.

Acrilan is the registered trade-mark of the acrilic fiber manufactured by the Chemstrand Corporation.



Serving the Textile Industry for over 50 Years
NEWARK, NEW JERSEY



Photo taken at Fair Lawn Finishing Co. - Courtesy of ELECTROMET REVIEW

# Here's why MODERN BLENDS call for MODERN AVISCO RAYON

with MODERN FINISHING



luxurious hand



improved drape



affinity for color



absorbency



comfort



luster



cross-dyeing style potential



less need for glazing



moth resistance



static resistance



superb tailorability



price stability

Great new things have been happening to the oldest man-made fiber. In American Viscose rayon research labs—the world's largest—the rayon fiber has been made stronger and more versatile.

Thus it is more useful to you and more desirable to the consumer.

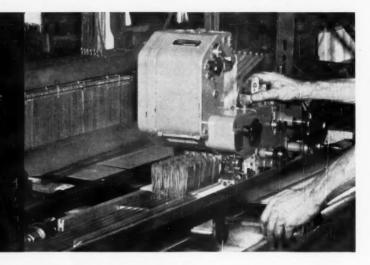
The versatility of this <u>modern</u> Avisco rayon fiber has been further enhanced by modern finishing. In blends with other man-made or natural fibers, it brings all the above fine qualities and many more.

Add the Avisco Integrity Tag to apparel at point of sale and the public knows that quality and performance are assured. For more details, call or write American Viscose Corp., 350 Fifth Ave., New York 1, N.Y.



# The Uster Dropper Pinner

- ★ 75% labor savings overhand-drawn closed drop wires
- ★ Up to 50% savings over hand dropping ★ The Uster system pays for itself in labor cost and loom down-time
- \* Portable or stationary



# The top combination in synthetics!

Users of Uster equipment combine precision-built machines with trouble-free operation...supreme dependability and maximum speed for minimum loom down-time...increased production with increased profits.

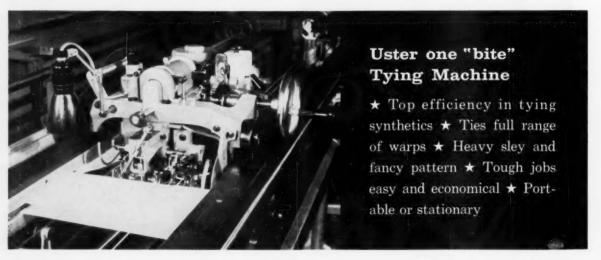
These facts have been proved through years of service throughout the textile industry...where the greatest advances in textile machinery have been made by Uster.

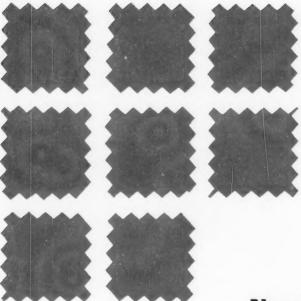
SALES OFFICES: Allentown, Pa., Greenville, S. C., and Needham Heights, Mass. In Canada: Hugh Williams & Co., 27 Wellington St., East, Toronto 1, Ontario

For FREE details of application in your operation, write Dept. DPT



USTER CORPORATION
Charlotte 8, North Carolina





# New Eastman dye series for best over-all fastness on polyester fibers

Specifically developed by Eastman chemists for polyester fibers, this new line of dyes provides the best over-all fastness currently available. Eastman's long experience in the manufacture and development of dyes for synthetic textiles has made the new dyes fit the needs of these popular new fibers—and the dyer. Eastman's new series includes nine primary and shading colors, plus black. Four additional colors are in the development stage.

No unusual dyeing procedures are needed in handling these new dyes. The fibers can be dyed in tow, tops, stock or fabric forms. Fabrics of one hundred per cent polyester filament fibers can be conveniently dyed in jigs. Fabrics woven of spun polyester yarns alone, or cotton, viscose or wool blends can be handled in dye-becks. Carriers or dyeing assistants are required, except where high temperature dyeings  $(250^{\circ}\mathrm{F.})$  are used.

Laboratory and commercial tests show that the new Eastman Polyester Dyes work well with premetalized wool dyes for polyester-wool blends. And virtually all types of viscose dyes are suitable for blends containing viscose or cotton.

Present Eastman Polyester Dyes include the following colors: Polyester Yellow RL, Polyester Yellow W, Polyester Yellow 5R, Polyester Red B, Polyester Red 2G, Polyester Blue GR, Polyester Blue GLF, Polyester Blue 3RL, Polyester Navy G, Polyester Black RB. Color samples are yours for the asking.

Technical assistance on dyeing polyester fibers is available from the Eastman Dye Service Laboratories in Kingsport, Tenn., and Lodi, New Jersey.

Remember-for the best over-all fastness in polyester fibers, use Eastman Polyester Dyes.

# Eastman Polyester Dyes

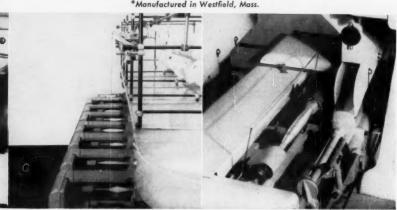


Eastman Polyester Dyes are sold in the United States by EASTMAN CHEMICAL PRODUCTS, INC., a subsidiary of EASTMAN KODAK COMPANY, in Kingsport, Tennessee, Lodi, New Jersey, and Greenville, South Carolina. On the West Coast through Wilson Meyer Co.: San Francisco, Los Angeles, Portland, Seattle and Salt Lake City. In Canada through Clough Dyestuff Co., Ltd., 1375 Cote Vertu, St. Laurent, P. Q.



Automatic Filling Winder

# A NEW HIGH IN WINDING QUALITY A NEW LOW IN WINDING COSTS



No. 1

# THE WHY OF QUALITY WINDING

The features of the Model 66 which contribute to quality winding, the protection of delicate yarns and better weaving are: - a progressive shock-proof start of winding spindles; a cam design (Fig. 1) which enables the operator to place all knots behind the traverse and on the outside of the bobbin; straight line delivery of yarn from tension to thread guide (Fig. 2) (the angle of the varn entering traverse guide does not exceed 10° from start to finish of bobbin); feelerless build (Fig. 3) - a diameter control mechanism advances the traverse without contacting the yarn and lays the yarn on the bobbin in a predetermined and precise arrangement; automatic pinboarding (Fig. 4) - yarn is not touched by human hands, after creeling, until it reaches the loom, except when piecing up.

The foregoing is accomplished with a "new low in winding costs" — as low as 1/4¢ per lb. in many cases. A contributing factor to this "new low" is an unmatched spindle speed of 15,000 R.P.M. This super speed is possible and practicable because of the cam design which reduces the cam speed to 1/3 that of a conventional cam at equivalent winding speeds.

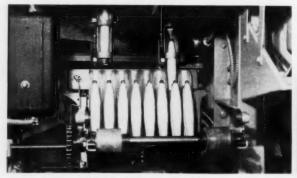
Why wait? Delay is costing you money. Start investigating now. Send for new Bulletin M-4A. No obligations.

# FOSTER MACHINE COMPANY

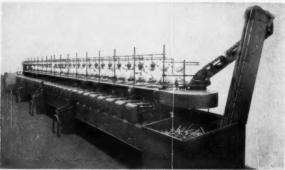
Westfield, Massachusetts, U. S. A.

Southern Office - Johnston Building, Charlotte, N. C.

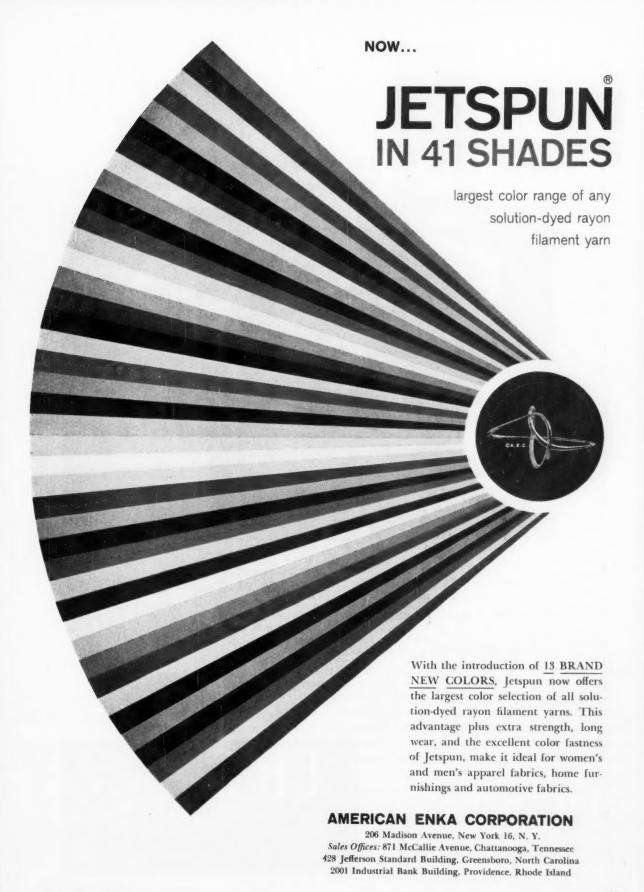
Canadian Representative - Ross Whitehead and Company Limited, 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont.



No. 4 — Automatic pinboarding

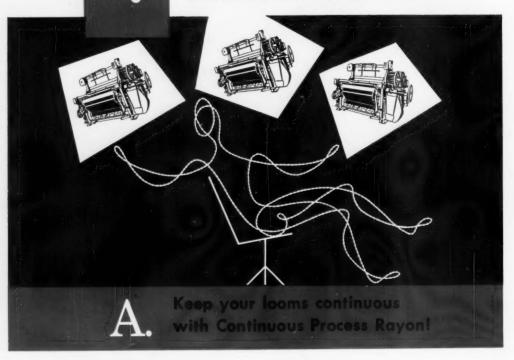


Typical installation showing centralized hopper for automatic bobbin replenishment.



efficiency expert!

How do you make the loom work overtime...and not the weaver?



No matter how many loom hours you figure on per week—you can top it. Switch to IRC Continuous Process Rayon...and suddenly you find that beating standard cost is simply daily routine.

No yarn is made so uniform from end to end, dyes so free of streaks, runs so free of breakdowns. Mile after mile, it's perfect inch by inch. In Continuous Process, it's 100% safe from the greatest cause of knots—no hands can ever touch it.

This is the yarn so free of knots, of breaks, of headaches that weavers of critical fabrics, like satin and iridescent taffeta, take pains to specify it. Yet it costs no more than ordinary rayon.

So why not give your looms a break instead of a breakdown? Specify IRC Continuous Process Rayon.



# Publisher's Viewpoint

# The Long-Range Prospect is Bright

In recent years, the textile industry has been beset with difficulties. No one in positions of responsibility in making and marketing fabrics can be said to have had an easy time. Low profit margins, the uncertainties caused by textiles' deep-seated proclivity to produce more than the market can absorb, the dangers of low-wage foreign imports-these and many other problems have given many of us cause for sleepless nights.

Understandably enough our industry has suffered, in addition to its real troubles, from faintness of heart. We have not been backward in telling the world how badly off we are. And the business community outside of textiles has listened to our words of lamentation. As a result, stories in the business and financial press about the low state of the textile industry are quite common. Investors are told over and over again in financial publications that textiles are a "low yield" industry, and not a good prospect for investment.

This "bad press" that textiles has been getting (largely due to its own fault) has had the effect of making matters still worse. Young people, hearing how inauspicious things are in textiles, have been frightened away from choosing our industry as a career. Investors, looking for likely fields to invest capital, have been strongly inclined to shy away from textile companies.

In view of all these discouraging aspects of our industry, it is tremendously heartening to learn that some mighty important and successful men in textiles are strongly optimistic about our industry's future. These men are convinced that the long-range prospects for textiles are bright. For example, J. Spencer Love, head of Burlington Industries, Inc., one of our largest textile manufacturing companies, recently expressed a basic optimism about textiles' future. Speaking before the Burlington Chamber of Commerce, he stated: "Far from being antiquated and out of step with the rest of industrial economy and lacking in imaginative, aggressive management, as we have been accused by some, the facts are that we have made as much progress as any other industry and will go forward even faster and more broadly in the next 25 years."

From the cotton side of the textile industry come similarly strong expressions of optimism. Mr. F. E. Grier of Abney and Erwin Mills and president of the American Cotton Manufacturers Institute, said last month that ACMI had been told by experts that changes in American living habits and an increase in population "could mean a 75% larger market for cotton consumption in apparel and home furnishing in 1965 than actual consumption in 1955."

Although both Mr. Love and Mr. Grier did not attempt to minimize the problems of the textile industry and particularly the threat of low-wage imports, their overall attitude is one of optimism: they see an expanding future ahead for textile manufacturing. In view of the stature both men have achieved in our industry, their optimism is encouraging and convincing. It is a spirit that can give all of us good reason to take heart and face the future boldly.

a. 1 Homecollough

By ROBERT C. SHOOK, Textile Economist

# Integrated mills find going rougher in current textile marketing climate

The war may seem long past, but readjustments to what took place then are still going on in the textile industry. Government regulations of the war period encouraged mill integrations from gray to finished goods. Price ceilings on different types of gray and finished goods were chiefly responsible.

How Ceilings Were Established-In establishing such ceilings, price control agencies made their best possible efforts to be fair. But they operated under severe handicaps:

First, there was much more information available about costs and profits in the production of textile gray goods. The organizations involved were comparatively large, and many of them were publicly owned.

Second, there was much less information about the costs and profits of converting. Most organizations were small and privately owned, and there were few published figures.

Third, since price ceiling decisions, in order to be fair, and to allow for the position of small businessmen, had to be based on past experience, there was no way to allow for the change in conditions which had been brought about by the war.

Vertical Integrations Were Profitable—In the textile and apparel industries, the change in selling conditions was extreme. This system of price ceilings, by making it profitable for the sources of gray goods' supply to finish their fabrics, naturally caused an industrywide wave of vertical integration.

There was only one thing wrong with this. Vertical integration, to the extent to which it developed during the war and early postwar periods, completely ignored the normal economics of textile distribution. Gray mills can't be blamed for accepting the finishing profits guaranteed under price ceilings by wartime sellers' markets. At the same time, these integrated mills could expect serious trouble, sooner or later, unless they could gear themselves to perform a multiplicity of finished goods marketing functions in normally competitive markets.

In any event, recent changes within the industry seem to indicate that problems of distribution are now beginning, if not to dictate textile management policy, at least to receive great consideration.

More Information Badly Needed—An evolution that has great practical importance for textile distribution has been taking place in the retail price volume structure of various end products. Everyone knows that income has increased tremendously. Everyone knows, or at least believes, that the textile apparel industries have not been getting their full share of this increase. And everyone suspects that this failure lies some place within the complex and labyrinthine structure of textile apparel distribution.

The price volume structure of most textile end products has been deformed by consumer trading up. But no one knows how much. What the industry needs is information, specific and detailed information, not only about these price pyramids, but about all the intricate economics of distribution. Without such information, new products will continue to be wedged into price structures that may be, and probably are, badly out of date. And it will continue to be easy for the industry to operate as it has in the past, chiefly on the basis of price competition.

Vice president and research director, A. W. Zelomek Associates, Inc., 350 Fifth Ave., New York City.

# Eastman's new 50 yarn

By J. M. Heape and R. H. Norrell Eastman Chemical Products, Inc.

Here is a detailed report on the functional properties and processing characteristics of this new acetate yarn

During the past several years Tennessee Eastman has done considerable work in spinning acetate yarns of novel cross sections. One of the first successful yarns produced was Eastman crystal yarn which is now available as Estron\* crystal and Chromspun\* crystal yarns. This yarn has found wide acceptance in sheer dress goods and other women's wear. The flat filament crystal yarn gives a decided optical effect of scintillation which cannot be obtained with a regular shaped acetate cross section.

A number of other new cross-section acetate yarns such as the X-section and the Y-section have been introduced commercially by Eastman for non-apparel use. The most recently developed cross section of importance in acetate is known as Eastman 50 yarn. This is a yarn composed of hollow or doughnut

shaped filaments.

Figure 1 shows the comparison of Estron regular and Eastman 50 yarns. As can be seen, this filament has a relatively round, smooth surface which results in approximately 15% greater luster. In addition to greater luster, from 5 to 10% greater bulk is gained from the Eastman 50 yarn and the resultant fabric has a smooth full hand. The smoothness gives a lower yarn to yarn friction and thereby increases the tear strength in fabrics containing Eastman 50 yarn. Another advantage of the new yarn is slightly improved insulating properties.

During the experimental work with this cross section, many different fabrics have been prepared in our Textile Development Laboratory. In every fabric there was invariably a decided improvement in the hand and appearance of the fabric. Figure 2 best illustrates the comparative cover of Eastman 50 yarn

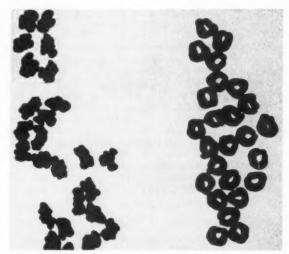
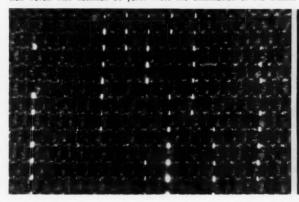


FIGURE I.—On the left is a microphotograph of the cross sections of a group of regular acetate filament yarns. On the right are cross sections of Eastman 50 yarns. The 50 yarn has a relatively round, smooth surface that results in greater luster and bulk.

and regular acetate. Note the elimination of the warpwise cracks which is normal for a  $180 \times 60$  loom-finished taffeta made from the normal cross-section acetate fiber.

During the development work on Eastman 50 yarn, the following formula was used to represent analytically the difference in hand which is quite noticeable when comparing fabrics made with Eastman 50 yarn and regular Estron yarn. This formula shows the cubic inches per pound of the two fabrics and then

FIGURE 2—Here is an illustration of the improved cover afforded by Eastman 50 yarn. On the left is a section of a 180 x 60 loom-finished taffeta woven with regular acetate filament yarn, showing warpwise cracks which are normal in this fabric. On the right is the same construction woven with Eastman 50 yarn. Note the elimination of the cracks.





<sup>\*</sup> Registered trademarks of Eastman Kodak Company

#### Fabric A

Heavy Sharkskin 300 denier dull Eastman 50 yarn 600 denier dull Eastman 50 yarn 48" - 92 ends/in y 36 nieks/ in

 $\frac{20736 \text{ x .} 01618''}{6.7 \text{ oz./sq. yd.}} = 50.08 \text{ cu. ins./lb.}$ 

Heavy Sharkskin

300 denier dull Estron regular yarn 600 denier dull Estron regular yarn 48" - 92 ends/in. x 36 picks/in. 46¼" - 95 ends/in. x 36 picks/in. 45½" - 97 ends/in. x 39 picks/in.

Fabric B

100% Regular Estron Yarn 20736 x .01474"

 $\frac{20730 \text{ x.} .01474}{6.6 \text{ oz./sq. yd.}} = 46.31 \text{ cu. ins./lb.}$ 

in Fabric Bulls

 $\frac{(50.08 - 46.31) \times 100}{46.31}$ 

Type Fabric

Fabric Bulk

Warp

Filling

 $\frac{10.317 \times 100}{46.31} = 8\%$  increase in Fabric Bulk

it is quite simple to show a percentage difference between them. (See above Table.)

Figure 3 illustrates the difference in bulk of Eastman 50 yarn and regular acetate on several of the fabrics made in the Eastman Textile Development Laboratory. In each case, the fabric containing the Eastman 50 yarn could very easily be picked out by its more luxurious and much fuller hand. At the same time, it can very easily be seen that a hand or cover equal to a regular acetate fabric can be obtained by altering fabric construction to take advantage of the 5 to 10% greater bulk in Eastman 50 yarn.

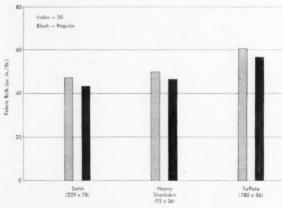


FIGURE 3—Fabric bulk with Eastman 50 versus regular Estron acetate

#### **Processing**

With few exceptions, Eastman 50 yarn can be processed in the textile mill in the same manner as regular acetate. Warps may be slashed using standard formulas of Stymer, gelatin, or loom-finished sizes. Trials have been made in several mills using the following general formulas based on 100-gallon finished size:

In our early work on testing Eastman 50 yarn, we found that certain types of tint were difficult to remove during finishing. We have recently found the following tints which we know to be fugitive on Eastman 50 yarn.

Rose Bengal

Ink Blue BJTDNA80 Extra General Dyestuff Corporation

 Division of General Aniline and Film Corp.
 435 Hudson Street
 New York 14, New York

No. 454 Rinse Free Blue —E. A. Murray Company 1113 Springdale Road Anderson, South Carolina

In the quilling operation, various type machines have been tried and it is found generally that the smoother, rounder surface of the Eastman 50 yarn gives a higher yarn to metal friction; consequently, to obtain the same level of tension consistent with good acetate processing, changes must be made in the number of discs or pressure applied in the tension device. This difference in tension between Eastman 50 yarn and regular acetate is much more noticeable in lower twist yarns than in the higher twist. This same difference in tension will also be encountered in warping.

Eastman 50 yarn has performed very well in throwing operations where twist was added to the acetate end only. However, in combination yarns where it is necessary to combine acetate with viscose, it has been found that due to the increased bulk of the Eastman 50 yarn it is necessary to overfeed slightly the acetate to alleviate the strain and minimize the stripbacks in the uptwisting and weaving.

#### End Uses

Questions have arisen at various times in discussing Eastman 50 yarn with stylists and especially with (Continued on page 81)

#### Loom Finish

50 - 60 lbs. Stymer LF, Elvalan Permaloid 155 6 - 10 lbs. Softener 10% - 26° Baumé ammonia based on weight of size Some cases small amounts of crystal urea were used

Slasher stretch would normally be 6 to 8%

#### Stymer S

45 - 60 lbs.6 - 10 lbs. SoftenerSome cases small amounts of crystal urea were used

65 - 85 lbs. (250 Gel strength) 10 - 20 lbs. Softener 3 - 5 lbs. Penetrant Max Thal ponders the



# How

# Thal upgrades knitwear

By Jerome Campbell

EDITOR, MODERN TEXTILES MAGAZINE

ALL HIS LIFE, Max Thal has been known as a man with a fantastic capacity for work. The harder he works, his associates say, the more energy he seems to have for more hard work. This capacity for work, combined with an awesome array of textile talents, led him to become skilled, as probably no other man in the United States, in every phase of the knitting business. And these skills and his capacity for unflagging effort have brought him at 51 to his present position as one of our most successful producers of knitted outerwear fabrics.

Max Thal's introduction to the knitwear trade took place one Monday morning in 1922 when he reported for work at a small underwear fabric outfit, Algro Knitting Mills. He was 17 at the time and he had been in the United States exactly two days. The preceding Saturday, he had arrived from Austria along with his father, mother and four younger brothers and sisters.

A friend of the family, known from the old country, sent Max over to Algro to get the job. He was put to work in the stockroom cutting samples and tending stock for a starting salary of \$12 a week. On his first day, he spoke no English, a handicap that began to diminish before that day was ended. Max Thal was a really brilliant boy. In the *Gymnasium* he attended in Austria he had been the outstanding student not only in his own school, but for the entire native city of Czernowitz. To improve his English, Max now enrolled for evening courses at Washington Irving High School.

When he was not working long hours in Algro's stockroom or taking courses at Washington Irving, young Max practiced the saxophone. In time he became skillful enough at music making to have his own dance band for earning a little extra money in week-end engagements. After a few years in the New York stockroom, Max Thal realized that he had learned all there was to learn working in that particular spot. From handling knitted fabrics all day

When Max Thal founded Alamac Mills in 1943 he had behind him 20 years of preparation. He was determined to make the best and smartest cloth that his knitting skills could turn out. Here is the story of his success

long—they were mostly cotton and rayon underwear cloths—Max had grown intensely curious to learn how these fabrics were made. He asked Algro's owner, Al Grodnick, to give him a job in the company's mill in West New York on the New Jersey bank of the Hudson across from midtown Manhattan.

Grodnick saw that it would be advantageous to have hard-working, intelligent young Thal in his plant which then had about 75 workers and 30 machines. Young Max then began a new stage of his life-long love affair with knitting and knitted fabrics. Working long hours in the mill, he learned how a knitting machine functions and he learned how to design fabrics—in the highly practical fashion followed by working knitters—by setting the machine to get the desired results. In time, Max Thal learned all there was to know about knitting and knitting machines, and what they can be made to do.

From working on knitting machines, he moved on to the finishing department at Algro. Soon he was spending six and seven days a week in the plant, so absorbing did he find the business of knitting and finishing fabrics. He developed skill in the designing and production of a growing number of novelty constructions for the underwear and millinery trade and this was the work he liked best. His single-minded absorption in his work is illustrated, his family and friends remember, by the fact that when he was married one Saturday morning in 1934, he excused himself right after the ceremony, telling his bride that he had to run over to the plant for a few hours and that he would be back in the evening to join her.

Completely absorbed in the work of designing, producing, dyeing and finishing knit goods, Max in those days had no interest in sales. The work of selling Algro's output was in the hands of two salesmen in New York City. Sometime during 1937, both salesmen quit at one time, leaving Grodnick in a tight spot. He needed a good man, a hardworking, trustworthy man to take charge of his sales. He decided that the man he needed was young Max Thal, a fellow who had no interest in selling, but a burning passion for making better and smarter knitted fabrics.

#### His Technical Skill Helps in Selling

Max moved over to the New York office and took charge of Algro's selling. He found, to his surprise, that his superb technical knowledge of how to make knitwear was a great asset in selling. With his characteristic energy and whole-hearted absorption in the task assigned him, Max made a study of his customers' needs. He found ways to mesh their needs for fabrics with his great skill in knitting. The result was an increased flow of business for Algro. Soon sales were higher than they ever had been in the company's history. Within a few years, he had built the sales volume to the point where it was necessary to have three or four salesmen.

Along about 1942, Max Thal began to think about his own future. Perhaps his thoughts were moved in this direction by the realization that he was completing his 20th year with Algro—the only job he ever had. Although he was making a good salary and had agreeable relations with his employer, he could not help dreaming of a new kind of knitwear business—a business that would make knitted fabrics able to compete with the finest woven cloths in the realm of high priced women's fashions.

Max Thal had a tremendous enthusiasm for knitted cloth, and for the basic principle of knitting. He was convinced that knit goods could be greatly upgraded to become more important in the world of fashion. He decided that he would establish his own knitting mill, and try to produce the highest quality knitted goods, styled to win a place in the world of smart fashions in both women's and men's garments.

With this aim in mind, he resigned from Algro and opened his own plant early in 1943. The beginning of Max Thal's own company, Alamac Knitting Mills, was extremely modest. In a loft on West 18 Street,

the new firm opened for business with four circular knitters and a working capital of \$3,700.

It was wartime, and new knitting machines could not be had for love or money. To help Max Thal for whose ability it had a tremendous respect, Supreme Knitting Machine Co. dredged up from the storerooms of its factory four old machines. These were rebuilt by Supreme mechanics working on their own time on Sundays.

But the four old machines and the few thousand dollars in capital were only a minor part of the assets of the new venture. The big and important fact was simply that Max Thal was in business for himself. So well-known was he throughout the knitting industry and so high was his reputation as a designer and producer of outstanding knitted novelty fabrics, that orders came pouring in as fast as they could be booked. Within six months, Alamac had 25 machines, and within one year it had acquired its own finishing plant in Lodi, N. J.

From the beginning, Alamac confined itself to outer-wear fabrics, a market where the room for growth was virtually unlimited compared with the crowded and sharply competitive underwear market. From 1943 until 1946, Alamac, along with the rest of the textile industry, operated under the easy economic climate of wartime boom. But when competitive conditions again became prevalent in the postwar era, Alamac, under Max Thal's quality and styleminded management, really came into its own as a leader in knitwear.

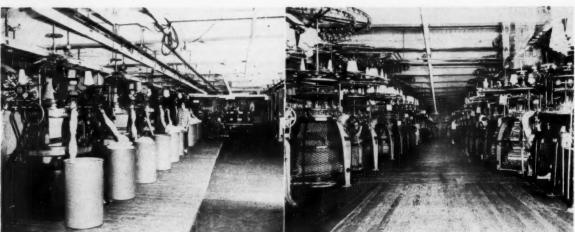
## Alamac Now Big Outfit

Max Thal's policy of concentrating on high quality and advanced pace-setting styles has been enormously successful. In the decade since the end of the war, Alamac has become one of the largest knitters of outerwear fabrics with especially heavy output in jerseys. Today at its mill and finishing plant in Indian Orchard, Mass., Alamac has 800 employees, 400 circular knitters, 26 tricot machines and six Wildman pile knitters. At Lowell, Mass., the company has a spinning plant for making Orlon yarns.

Alamac also has complete facilities for finishing its own fabrics. These include up-to-the-minute equipment for package dyeing of yarns, piece-dyeing gray goods and finishing both yarn and piece-dyed fabrics.

(Continued on page 72)

YOU CAN EAT OFF THE FLOOR HERE—At the left are Wildman pile knitters at Alamac's Indian Orchard, Mass., plant, knitting "Furalla", a fur-like pile fabric of Orlon-Dynel. At right is an aisle in Alamac's circular knitting department showing some of the 400 circular machines in the plant.





TTRADE MARK REG. PENDING \*REG. U. S. PAT. OFF.

# Explore the advantages of new **DISPERSCON** † Powders Latest addition to the **AMANTHRENE**\* Vats

AMANTHRENE Vat Colors are now augmented by new, highly concentrated DISPERSCON Vat Powders. Easy-to-use...rapid-wetting...non-dusting. In paste or powder form, AMANTHRENES offer **excellent washability** and light fastness. Ideal for package machine and beam dyeing of cotton and rayon dress fabrics, sportswear, socks and shirtings. For details on the AMANTHRENE range, including new DISPERSCONS, write or call your A.A.P. representative at our nearest branch.

### AMERICAN ANILINE PRODUCTS

A UNIT OF KOPPERS CO., INC.

50 Union Square, New York 3, N. Y. • Planh Lock Haven, Pa. BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. • Chicago, Ill. Charlotte, N. C. • Chattanooga, Tenn. • Columbus, Ga. • Los Angeles, Cal. Dominion Anilines & Chemicals, Ltd., Toronto, Canada • Montreal, Canada

### the BIG difference

in hosiery is...

### LANASEAL\*

THE HOSIERY WONDER WORKER

When used with other Fancourt finishes, Lanaseal performs wonders which the hosiery industry has been long seeking!

Here's what LANASEAL does:

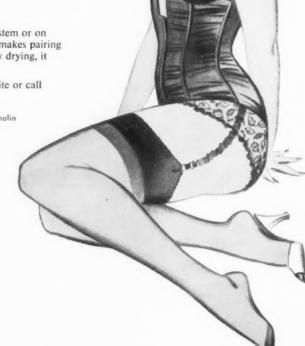
- · Adds beauty and comfort to nylons.
- Makes hosiery go on and off legs as easily as on boarding equipment!
- · Improves dulling!
- · Makes boarding easier!

When used on either the Dunn System or on conventional boarding, LANASEAL makes pairing easier. When used with belt or tray drying, it eliminates sticking.

For more details on LANASEAL, write or call Fancourt today.

\* Contains Lanolin







38

### W. F. FANCOURT CO.

520 SOUTH DELAWARE AVE. PHILADELPHIA 47, PA.

### SOLVING FINISHING PROBLEMS SINCE 1904

SOUTHERN OFFICE—846 S. MAIN ST., BURLINGTON, N. C. CANADIAN OFFICE—CHEMTEX PRODUCTS, LTD. 49 DENSLEY AVE., TORONTO 15, ONT.

### MILL TEST PROCEDURES

### a new series on quality control

By Norbert L. Enrick\*

## Yarn Preparation Tests for Better Weaving

Eighth of a Series

CONTROL of quality in winding, twisting and quilling should assure yarn preparation which is conducive to a low rate of machine stops in warping, slashing and weaving. This in turn means increased production at lowered cost per yard. In addition, the better prepared yarn means less weaving difficulties with fewer seconds, short ends and rags.

In addition to the test procedures in winding, twisting and quilling, a procedure is also furnished for control of Purchased Yarn Quality, for use by those mills who buy some or all of their yarns. This procedure makes brief reference to determinations of yarn number or denier, twist, moisture regain and package size, which have been furnished in detail in prior instalments. On filament yarns purchased, an additional Dye Index test is desirable, as described here, since many hidden defects in this yarn would not otherwise show up, until after the cloth is already woven.

### **Testing Forms**

Convenient testing forms, serving both as worksheets and reference records, are illustrated in several examples. Figure 22 shows a form for determining the quality of purchased spun or filament yarn, Figure 23 serves as an aid in performing slub-catcher checks on winders, and Figure 24 facilitates the determination of package sizes on twisters, using the general procedure for package size testing previously presented.

### Frequency of Testing

As in all other mill processing departments, the best testing frequency represents only a compromise between the degree of quality assurance desired and the cost of testing. Under prevailing economic and marketing conditions, the following represents testing frequencies considered feasible:

- Winder Tensions and Slub-Catcher Settings— Check all frames on filament or spun synthetics weekly. On less critical cotton or woolenworsted yarns it may be possible to reduce this frequency to only once every five weeks. These principles apply also to quilling frame checks.
- Ply Twist and Twist Settings—As a routine, a check every five weeks should be adequate. However, on new yarn styles or frame changeovers, an immediate test is advisable on the new set-up.
- 3. Purchased Yarn Quality—Product from new suppliers should be checked on a lot-by-lot basis. After confidence in the supplier's own quality control has been justified from past performance, a check of only every fifth to

tenth lot appears feasible. These principles apply also to tests of Filament Yarn Dye Index.

### **Detailed Test Procedures**

The test procedures, including purpose of test, sampling and evaluation of test results, are furnished here as follows:

- 1. Purchased Yarn Quality test.
- 2. Filament Yarn Dye Index test.
- 3. Winder Tensions Check.
- 4. Winder Slub Catcher Settings.
- 5. Twist Setting Test.
- 6. Ply Twist Determination.
- 7. Quilling Frame Check.

These represent the essential routine tests for control of quality in winding, twisting and quilling.

PURCHASED YARN QUALITY

#### Purpose

To test filament and spun yarns for conformity to specifications, and determine relative quality performance of different suppliers.

#### Fauipment

Meter stick, yarn reel, torsion balance, grain and pound scales, twist counter, microscope, glass slides, pick needle.

### Sampling

From the lot to be tested, choose five cases at random. From each case, take two random packages, identifying each as to case number.

#### Procedure

For each of the ten packages selected for testing, determine:

- 1. Yarn number or denier.
- 2. Turns-per-inch of filament or plied spuns.
- Filament count of untwisted yarns, by collecting the specimen under a glass slide and examining under a microscope.
- Net weight of each package, accurate to one twentieth pound.
- 5. Moisture regain.

Next, correct the denier and package weights to standard moisture regain, as shown in the Moisture Regain test procedure, using the following standards: 6.5% for cotton, 11% for viscose, 6.5% for acetate and as specified for blends, such as ASTM Method D507.

Return the packages to their proper cases. Obtain the net received weight of the complete lot, the net case weights, and the number of packages per case. By dividing the net weights per case by the number of packages per case, the average net weight per package is obtained.

#### Evaluation

Determine the averages and variation coefficients for the quality characteristics tested, by following the

 $<sup>\</sup>ensuremath{^{\circ}}$  Institute of Textile Technology, formerly with Werner Textile Consultants.

Mill: Yarn No.							Supp	olier		Date Rece	ived:	
Shipment No.:				Morr	Moisture Regain: Te			ed by:		Date Tested:		
Case	Cone	Yorn or Denier		Tv	Twist Strengt		ength	F	ockage We	ight	Filoment	Elongo-
No.	No.	No.	Range	T.P.I.	Range	Lbs.	Range	Lbs.	Ronge	Per Cone"	Count	tion %
	1											
	2											
	-											
	2											
	1											
	2											
	1											
	2											
	-								1			
	2											
Averag	98											
orrec		M.R.	%	n=		Size: M.R.:	%	M.R.	%	M.R.	4.5	
Coeff. Variat			%						%			
Votes:												

Fig. 22

procedure provided in the convenient recording form shown in Figure 22.

### FILAMENT YARN DYE INDEX TEST

#### Purpose

Dye index testing of filament yarns prior to processing an entire lot, can often reveal hidden faults in the yarns, which would lead to streaky or "puckered" cloth after weaving and finishing.

#### Sampling

From the shipment to be tested, choose five cases at random. From each of these, take two packages at random, noting the case number on each package.

### Procedure

- From each package, wind a filling bobbin, using the outside layer of yarn on the package. Mark the case number on each bobbin.
- On two out of the above ten packages, continue winding filling bobbins until the package has been stripped. Then select three filling bobbins per package, spaced about equally throughout the package, noting the approximate position on each bobbin.
- Ask the weave room to weave these filling bobbins into a warp, marking the package data for each bobbin along the side of the cloth.
- Dye application on the woven cloth will now reveal any lack of uniformity in the dye index of the yarns.

#### Evaluation

Two types of faults may be revealed by the test procedure:

- a. Lack of uniformity of dye index in the yarns obtained from Step 1 above indicates the presence of mixed yarns in the shipment. Lots need to be kept separate, since small differences in the supplier's processing may introduce hidden peculiarities, which become apparent only after dyeing.
- b. Lack of uniformity of dye index among the filling bobbins from the same package, as obtained from Step 2 above, indicates shrinkage differences between the inside and outside layers of the package. In addition to streaky dyeing,

these may also cause a puckering effect in the cloth.

Prior to rejecting any lots for non-uniform dye index, assurance should be had that the mill's own quality control program is maintaining uniform tensions throughout winding and weaving.

### WINDER TENSIONS CHECK

#### Purpos

Since a multitude of operating difficulties in weaving and knitting can often be traced to improper tensions in winding, it is essential to establish proper winding tensions and then to check periodically, so as to assure that the established standards are being maintained.

### Sampling

Check every spindle position on the winder under test.

### Procedure

- Obtain the standards for correct number and size of tension weights, established by the mill for each yarn style.
- Inspect each spindle position on the frame for the following:
  - a. Off-standard tension weights.
  - b. Felt shock absorbers missing.
  - c. Supply not lined up with tension porcelains.
  - d. Excess accumulation of fibers and dirt.

### Evaluation

Note and report all off-standard spindles, by frame number and spindle number. Compute the percentage of off-standard spindles. As a rule, the following difficulties may arise from slack or excessive tensions:

- a. Slack Tensions
  - Soft Package, short in yarn and subject to deformation in transport.
  - (2) Slack tension does not break out weak spots in yarn, which will later cause stops in the more expensive knitting and weaving operations.
- b. Excessive Tensions
  - Tight package will not unwind properly in knitting and weaving, thereby causing excessive machine stops and needle breakage.
  - (2) Tight tension will cause unnecessarily high rate of breaks during winding.

#### WINDER SLUB CATCHER SETTINGS

#### Purpose

The blade on a slub catcher must be set close enough, so as to break out slubs in the yarn. Otherwise, these slubs will pass into subsequent more expensive knitting and weaving operations, where they will cause machine stops and damage to fine machine parts, such as knitting machine needles. Yet, the blade should not be set too close, since it will then chafe the yarn.

### Equipment

Feeler gage.

(Continued on page 73)

# Quality/

Is Woven In With

Stehedco

Jacquard Heddles and Lingoes

Stehedco
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.

Southern

Experienced STEHEDCO Engineering has produced the Perfect Jacquard Heddles and Lingoes for Quality Weaving and longer trouble-free service. Made of finest quality high carbon steel, nickel or cadmium plated, or high quality stainless steel. They are polished to a high degree of smoothness to insure the very least amount of friction and greater production.

The eyes are very highly polished and turned to precisely the right degree for allowing free passage of the warp with the least amount of wear.

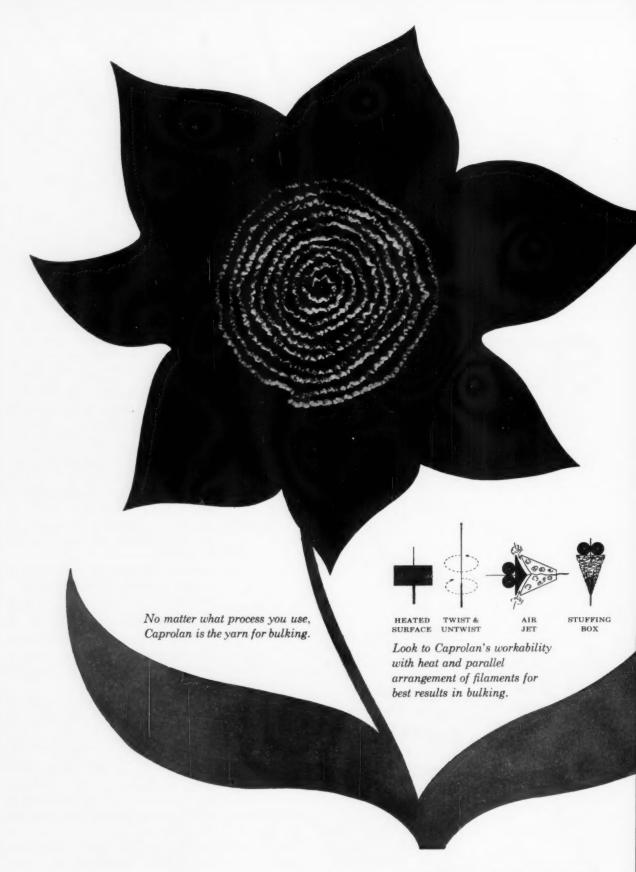
STEHEDCO Lingoes are made of either copper-coated steel or brass, in the correct size and weight for your requirements. The T-eye coupling is swaged fast to the heddle, assuring a free moving, frictionless, strong and durable connection requiring no attention or replacement.

STEHEDCO Jacquard Heddles and Lingoes are shipped ready for installation in your looms.

Our field engineers will gladly assist you in determining the most suitable type for you. There is nothing better to improve your production than the combination of STEHEDCO Quality and Service.

8-H-56

Other Plants and Offices: Granby, Quebec, Canada—Lawrence, Mass.
Greensboro, N. C.—Atlanta, Ga.—Textile Supply Co., Dallas, Texas
Albert R. Breen, Chicago, III.



### New Bloom for Carpet and Upholstery

look to Caprolan, heavy yarn for maximum results in bulking

If you are a manufacturer or user of bulked yarn look to Caprolan heavy yarn for maximum results. Thanks to Allied Chemical's fiber engineering, Caprolan is unusually compliant to the accepted bulking processes.

Available in a wide selection of deniers and filament numbers (in a range of 2000 to 50,000 denier), Caprolan heavy yarns are supplied without twist on knotless 10-pound packages. Because the filaments lay parallel as they are bulked they respond to the various processes more uniformly than combinations of twisted yarns. Also, Caprolan heavy yarns are more workable with heat, and mill economies may be effected either by working at lower temperatures or at higher production speeds.

Mill reports confirm our conviction that bulked yarns of Caprolan give more cover when used in carpeting or frieze types of fabric. They also have excellent resilience and contribute to the warm hand and appearance of the fabrics in which they are used.

Caprolan heavy yarns have high strength, outstanding abrasion resistance and may be dyed with virtually every class of dyestuff.

Caprolan heavy yarns may be engineered to your own requirements in the range of 2000 to 50,000 denier.

They are supplied on nonreturnable paper tubes.

For further information or technical assistance write:

 $caprolan^{\circ}$ 

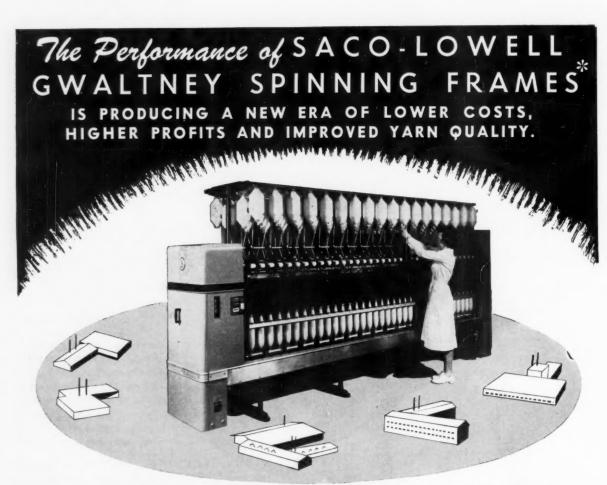
Fiber Sales and Service

Allierd

National Aniline Division

261 Madison Avenue, New York City 16, N. Y.

†Allied Chemical's polyamide fiber



Your mill can match these new Standards of Production with a Gwaltney Installation.

MILL B

MILL A							
Count	T. M.	Ring Size	F. Roll Speed	E#.	Net Pounds Per **Frame Per 24 Hours		
7.25's	2.85	3"	200	94	930		
10's	2.94	3"	201	95	686		
11's	2.94	3"	197	95	611		
13's	2.94	3"	199	95	523		
17's	3.00	3"	186	96	378		
18's	3.00	3"	185	96	355		
24's	3.12	3"	155	97	224		
26's	3.25	3"	147	981/2	200		
28's	3.25	3"	143	99	182		

Efficien	scy in	cludes	trave	er chi	onge :	and	frame	ch	ange	down	times.	
 Taken	from	actual	Hank	Clock	doily	res	dings	on	240	spindle	frames.	

WARP											
Count	Twist Multi- pilor	Twist per Inch	Spindle	Ring	Frov- eler Speed	Front Roll Speed	EM. ciency	Net Production per Spindle per Hour			
12	4.30	14.88	8600	3.00	6754	184	94	.087			
16	4.75	19.00	9100	3.00	7147	152	95	.056			
20	4.75	21.24	9100	3.00	7147	136	95.2	.041			
24	4.75	23.27	9100	3.00	7147	124	95.4	.031			
26	4.75	24.22	9100	2.75	5109	120	95.6	.028			
30	4.75	26.02	9100	2.75	5109	111	97.0	.022			

THE ABOVE INFORMATION IS FACT . . . SUBMITTED TO US BY MILLS NOW OPERATING GWALTNEY SPINNING FRAMES.

Mills interested in matching these standards should have a Saco-Lowell Sales Engineer prepare a "Forecast of Savings" based on a Gwaltney-Saco-Lowellizing program.

GWALTNEY IN OPERATION.

	No. of spindles	14 sides	20 sides	20 sides 2400	26 sides	10 sides 1200
	per spinner No. of frames	1680	2400		3120	
	per doffer	18	18	18	18	18
	010	0.7	-		-17	_
6	CVL	П	Ш	W	41	200
I G	UUL	O-1	JU	Ш		Ш
1 350	60 BATTERYM					
	IAITS CHINGE LIN					

Mill Names on Request

MILL C

11/2" 11/32"

1.30 1.30 1.30 30.0

24.6 30.7 33 8

3" 3" 3" 3" 3"

185 182

150 120

.53 .75 .81 .65

(Knit) (Knit) (Knit)

3.10 3.25 3.25

7200 8300 8300

12 hrs 16 hrs 18 hrs

12 oz. 12 oz.

Double Double Double

114.

12 oz. 12 oz.

104

5655 6509 6509 7068 4320

Yarn No.

Creeling

Twist multiple

Hank roving

Ring diameter

Front roll speed

Oz. per bobbin

(#/120 yds.)

Traveler speed

Skein break

(rpm)

Doff time

Spindle speed (rpm)

Cotton

Draft

30/1 16/1

(Knit) (Soft)

11/32" 11/2"

3.25 2.50 1.30 2.00

9000

160 175

24 hrs

Double

24.6

5500

10 hrs

11-12

100

.53

pprox

<sup>\*</sup> NOW OVER 490,000 SPINDLES OF

## FEATURING ALL SEVEN

"TERGITOL" NONIONIC SURFACTANTS

Trade-Mark

### NONIONIC NPX

versatile detergent, wetting agent, and emulsifier

### DESERVICE NEW DEKOR

oil-soluble emulsifier and detergent

### Donionic DP-27

aromatic-soluble emulsifier and wetting agent

### Nonionic NP-35

water-soluble emulsifier and wetting agent in presence of dissolved salts

### NONIONIC TMN

wetting agent and penetrant with good rewetting properties

### NONIONIC NP-40

water-soluble emulsifier and wetting agent above 100°C.

### Nonionic XD

outstanding emulsifier and low-foaming detergent

Here's a cast that gets top billing in the many different types of surface activity, thanks to the specialized talents of the individual performers. Because no one surfactant can play all parts equally well, Carbide has developed a large group of Tergitor nonionics. Each one is carefully designed for maximum efficiency under specific conditions of performance. That's why—whether it's wetting, detergent, emulsifying, or dispersing action—a Tergitol nonionic will fill the bill.

For more details on these outstanding products, call or write our nearest office for samples and further information. In Canada: Carbide Chemicals Company, Division of Union Carbide Canada Limited, Montreal and Toronto.

The term "Tergitol" is a registered trade-mark of Union Carbide and Carbon Corporation.

CARBIDE AND CARBON CHEMICALS



Carbide and Carbon Chemicals Company

A Division of

Union Carbide and Carbon Corporation

30 East 42nd Street Te New York 17, N. Y.

### REPORT FROM EUROPE



BY SPECIAL CORRESPONDENT

### Sweden has new acrylic; rayon staple output rises in England; Swiss nylon sales drop off

PARIS—Sweden has come up with a new man-made fiber called Tacryl. Said to be similar to Orlon, it was invented by Hans Erik Larsson, an engineer of Ljungaverk, and is about to enter commercial production. Superfosphat AB (Swedish Superphosphate Co.) has invested heavily in the project during past seven years and says it will be ready to turn out fiber for underwear trade by Spring. Output then will be running at a 150-ton a year clip.

The underwear will probably be mixed with wool and/or rayon. Eventually Tacryl will be woven into fabrics for suitings, dresses, skirts, blankets. Superfosphat has also developed a new spinning process for handling the fiber.

Shorter Work-Week in Germany—In April all West German textile workers will get a 45-hour work-week, three hours below present levels. At the same time, wages will go up 7 to 9%. Nearly 675,000 textile workers will be affected.

**UK Staple Fiber Output Up**—British rayon staple fiber output in 1956, buoyed by rising demand from carpet makers and industrial users, showed rise of 6% over 1955. In view of downtrend in demand for rayon staple from automobile manufacturers, textile trade is far from gloomy over last year's achievements. Incomplete 1956 figures, incidentally, show that filament yarn deliveries to industrial users made up 30% of total shipments.

Imperial Chemical Industries Ltd. (ICI) will start work this Spring expanding its Wilton, Yorkshire plant which will see Terylene capacity boosted about 36% by 1959. Output is running at 22 million pounds yearly; it will jump to 30 million. ICI is about to launch new Terylene fiber yarn for hosiery trade. And toward mid-year, ICI will market a new monofilament Terylene. Meanwhile a novel development in England is the announcement that Gee Cross Laboratories of Manchester has developed a powder rinse for the housewife which is said to make fabrics fireproof. It is supposed to be non-toxic and harmless to fabric and hands.

Royal Albert Hall, London, will be the scene Feb. 18-22 of Britain's National Nylon Trade Fair. Sponsored by the British Nylon Spinners Ltd., the exposition will show nylon in all its uses, colors and textures.

Swiss Nylon Sales Slip—Australian import restriction, declining demand for spun nylon, fewer nylon imports for finishing and foreign price competition caused a 1956 drop in Swiss nylon exports—estimated at about 12%. Britain and France are said to be among the price cutters, and German Perlon competition also hurt. A Swiss price cut was being expected momentarily.

Europe's Promotion Problem—Europe's two big man-made fiber groups, one including producers and the other users, remains split on the techniques needed to promote synthetic textiles although both admit promotion is necessary. The International Association of Man-Made Fiber Users (France, Belgium, U. K., Austria, Holland, Italy, Switzerland, Spain) generally don't like "over-promotion" of certain man-mades without sufficient (they say) consumer understanding.

The International Rayon and Man-Made Fibers Committee would like quick users' financial help in launching a promotion drive. The split doesn't seem irreconcilable. It came to light during the recent Gothenburg labeling conference. It's being worked over again at the Geneva users' headquarters and here in Paris by the producers.

**Nylon for Brazil**—The Credit Lyonnaise is said here to be completing a loan worth about \$1.3 million to Brazil for early construction there of a nylon plant. Rilson Brasileira SA of Sao Paulo would buy sufficient machinery and equipment to produce nylon yarn—perhaps by the end of next year.

### DYEING and FINISHING SECTION

For a **brighter New Year TINOPAL Optical Bleaches** 

by Geigy

Tinopal optical bleaches can make your New Year brighter because there is a Tinopal specifically designed for practically every fibre and process.

New and exciting developments continue to come out of Geigy Research and will be announced when ready. Since every Tinopal listed has considerably greater versatility than can be described herein, your Geigy representative will be helpful in selecting the type for your requirements.

TINOPAL ANA. ACETATE and ORLON; light fastness unusual for brighteners.

TINOPAL WGA. WOOL or NYLON yarns and piece goods; superior whites; excellent affinity.

TINOPAL RBNA. NYLON and CEL-LULOSIC: applied in bleaching or scouring; offsets yellowing in heat setting, finishing and pleating.

TINOPAL GSA. NYLON; in scour-

ing; more soluble, better leveldyeing than RBNA, however, less effective where heat treatment required.

TINOPAL 2BA. CELLULOSIC; soluble; excellent for packages and where levelness and penetration required. Unaffected by mild acid conditions.

TINOPAL BVA. CELLULOSIC: soluble; level; preferable to 2BA in cold application or long baths; shade slightly redder.

TINOPAL 3BSA. CELLULOSIC; resembles 2BA: very economical.

TINOPAL 4BMA. CELLULOSIC; economical; fast drawing.

TINOPAL SP EXTRA 143%. CEL-LULOSIC; designed to work in presence of starch derivatives and resin finishes.

Tinopal is a Geigy registered Trade Mark

PRINTING SPECIAL PROCESSING

BLEACHING

GEIGY DYESTUFFS

DIVISION OF GEIGY CHEMICAL CORPORATION, SAW MILL RIVER ROAD, ARDSLEY, N. Y. BRANCH OFFICES: NEW ENGLAND-NEWTON UPPER FALLS, MASS. . CHARLOTTE, N. C. CHICAGO . LOS ANGELES . PHILADELPHIA . PORTLAND, ORE, . TORONTO

### SPOT DESIGNS

By Victor Lobl

In the preceding articles\* we have presented the method of drafting spot figures on the design paper by means of different distribution orders. Still pursuing this important weave group we follow up with a demonstration of how the different pattern arrangements can be further modified or augmented to produce a more varied appearance of the cloth. Our attention continues to be directed primarily to dobby patterns although many of the pointers brought out in the ensuing discussions will be found applicable to all types of spot weaves including elaborate Jacquard designs. In giving preference to these designs we are influenced by their current popularity and the wide range application of these simple structures.

The traditional dobby designs in the spot weave group are abstract, very often geometrical, patterns of small repeating motifs. These appeal to us not for their pictorial representation, but because they present certain forms and arrangements which give the fabric distinction without demanding artistic perfection.

### Symmetrical designs

More often than not, spot designs woven on dobby looms are symmetrical in construction. This preference for symmetry in design stems from sound tech-

Fig. 104a—Symmetrical design

nical reasons. However, before going into the technical angle of the problem it is necessary to understand the chief basis upon which such designs are constructed. Fig. 104a is a typical example of such a design. By observing this motif, it will be noted that a longitudinal line drawn through the center bisects the motif vertically into two identical parts of which one half is like a reflected image of the other half. Speaking in designing terms, one may also say that the second half of the motif is an exact copy of the first half drawn in the opposite direction. Incidentally, many of these figures are divisible horizontally also into corresponding halves but this condition generally is of no particular advantage to any of the manufacturing processes.

From the technical point of view, the potential merit of symmetrical motifs is the balanced structure that enables large scale designs or diversified figure distribution to be made within the limited range of the dobby loom. As an example of this let us take another look at Fig. 104a. This motif, as you will note, extends over 35 ends. If each end had to be drawn on a separate harness, it could not be woven on a dobby loom as these looms are built to a maximum capacity of 26 harnesses. Fortunately, with its balanced structure, this design has many ends which are raised or lowered correspondingly and therefore can be drawn in the same harness. This reduces the number of harnesses required for this motif to ten. (See drawing-in draft above the motif.) The lesser harness requirement leaves additional capacity that can be utilized for further development of the decoration or its arrangement. In this case it has been used for placing two motifs in each repeat in a staggered distribution. (Fig. 104b) Using four harnesses for the ground weave and ten harnesses for each of the two motifs

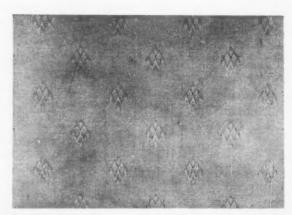


Fig. 104b—Fabric showing staggered distribution of the motif illustrated in Figure 104a.

<sup>\*</sup> Jan., p. 50; Oct. '56, p. 52.

# Estron acetate in a new improved form

# Eastman 50

From Eastman acetate research comes another major development... Eastman 50. Here it is, the new improved acetate yarn that improves the appearance of your fabric. With all the good points of Estron, plus these important additions:—

- Better cover, with from 5% to 10% greater bulk
- A crisper, firmer hand with a smoother feel
- A richer look
- From 3% to 5% greater insulation

Mills already working with the new yarn are enthusiastic about its performance. In taffetas, for example, the added covering power of Eastman 50 produces a special richness. In crepes, Eastman 50 makes for greater resilience. And in satins, it gives a better face, an improved hand. Superior results are predicted for a variety of fabrics, including tricots, elasticized fabrics for swimwear and undergarments, and drapery fabrics.

Eastman 50 is available now at the same price as conventional Estron and in the same put-ups. Ask your nearest Eastman representative.

TEXTILE DIVISION OFFICES: New York, N. Y., 260 Madison Ave. East Providence, R. I., 888 Broadway
Greensboro, N. C., 435 Jefferson Standard Bldg.
Greenville, S. C., 1912 Augusta Road
PENNSYLVANIA REFRESENTATIVE: Reading, Pa., 230 North 5th St.
WEST COAST SALES REPRESENTATIVE: Wilson Meyer Co.
333 Montgomery St., San Francisco, Calif.
4800 District Boulevard, Los Angeles, Calif.
821 Second Avenue, Seattle, Washington
520 S.W. Sixth St., Portland, Oregon

EASTMAN CHEMICAL PRODUCTS, INC., SUBSIDIARY OF EASTMAN KODAK COMPANY, 260 MADISON AVENUE, NEW YORK 16, N.Y.

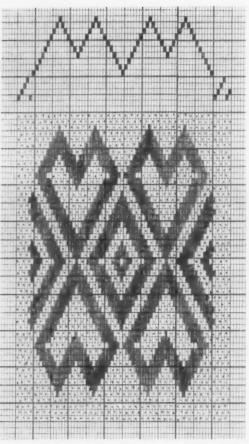


Fig. 105—Symmetrical pattern with zig-zag harness draw.



in the repeat, this design requires a total of 24 harnesses for weaving.

The construction of a symmetrical design probably will be better understood by referring to the drawingin draft of Fig. 104a once more. It will be noted that exactly in the middle of this draft where the end is drawn in the 14th harness is the center or pivotal point. From this center to the left and to the right the drawing-in sequence follows an identical order which coincides with the longitudinal arrangement of the motif. These types of drawing-in drafts are called pointed drafts. The simplest pointed drafts run in a straight line first in one direction and then back in regular sequence. Such a draw is illustrated in Fig. 107; however, it is not necessary that the pointed draft always follows a straight line. The direction as well as the intervals in the draw order may be varied. Indeed, by varying the order of the draw, many attractive modifications of the original motif can be created as in Fig. 104a. This is a typical example of a varied pointed draw. Other variations in this category are illustrated in Figs. 105 and 106. By exploiting this concept many elaborate and seemingly complicated designs can be drafted down and adjusted to fit into the dobby range of the mill. On the other hand this method is also suitable for developing massive figures where bold effects are desired.

Fig. 107—Symmetrical design in drop reverse arrangement.

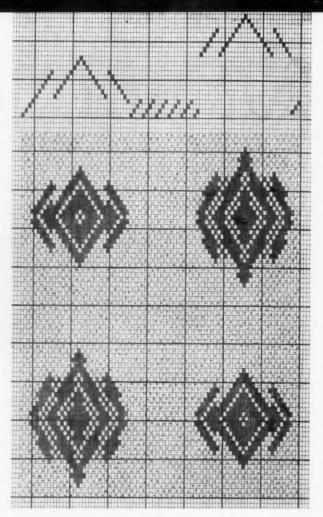
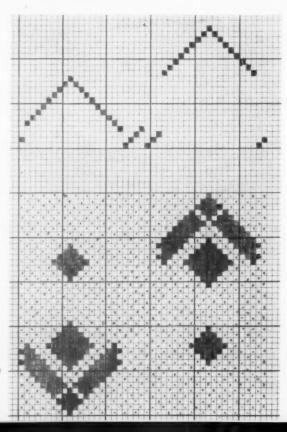
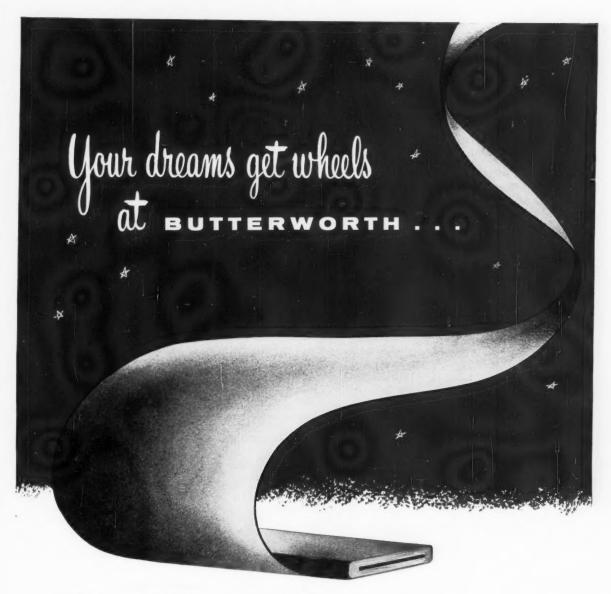


Fig. 106





A new fiber . . . a new chemical . . . a new special finish . . .

Your ideas get rolling, when you team them with Butterworth Developmental Engineering. And the results can mean new horizons for the textile industry, new profits for you.

Butterworth engineers, equipment and manufacturing personnel become yours, to mechanize your idea into reality. Butterworth Developmental Engineering bridges the gap between your natural or synthetic fiber and a complete plant, between your new process and a complete range, or between that new special finish and the complete machine you need. Butterworth develops *your* idea for *you* . . . from blueprint to production line, or anywhere in between . . . and in complete secrecy.

Butterworth builds 84 standard machines for textile finishing. Let Butterworth go to work for you on an adaptation of one of these machines or a complete new machine. Add "wheels" to your dreams.

H. W. BUTTERWORTH & SONS COMPANY, Bethayres, Pennsylvania Developmental Engineering • Research • Machine Building BUTTERWORTH

O Serving the Textile
Industry Since 1820

### Subsidiary effects

Since pointed drawing-in drafts go with symmetrical designs, it is easy in such cases, to add secondary motifs to the main figure for more variation. Secondary or subsidiary figures give an enlivened appearance to the cloth. Fig. 106 is a typical example and it shows how a variety of spots can be made with the same drawing-in draft.

Fig. 107 also illustrates a symmetrical design and it features a secondary motif as well. However, in this case the design has been further varied by weaving the second unit of the repeat in a reverse direction from the first one. In this way the motifs appear the same whether viewed from top or bottom.

The method illustrated here can be carried out and exploited in many ways. For example, an attractive ornamentation is usually obtained by placing different size diamonds, squares, stars, round spots, or other suitable figures one above the other. Where the objective is an all-over appearance, the usual answer to the problem is the use of dominant central figures and smaller ones filling in the space between them. These smaller forms present the uniting element that produces the all-over appearance.

The development of an all-over effect with spot weaves is indicated in Fig. 108. It is of interest to note in Fig. 108 that all the subsidiary figures require only two extra harnesses for weaving. The most pleasing combinations are those where the subsidiary

small figures show a subdued contrast with the bolder central motif. Still another possibility is a large center form with supplementary smaller ones around it. Such an idea is illustrated in Fig. 109. An interesting

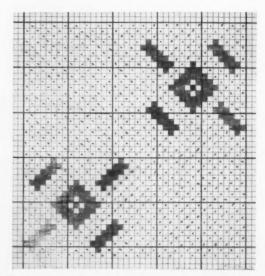


Fig. 109—Central figures with supplementary motifs around them.

detail to observe here is that the supplementary figures are not symmetrical but are inclined or slanted forms. Moreover, they are not slanted in the same direction in both halfs of the design; in one half they are turned to the right, whereas in the second half the incline is to the opposite direction. It will be well to remember that slanted figures appear better in the cloth if they are varied in relation to each other, or else they form a definite diagonal line in the fabric that is not always desirable. From the standpoint of designing figure weaves this is an important point because usually two or more motifs constitute a repeat and the way these are varied in relation to each other makes a difference in the appearance of the cloth. The technique employed here is more effectively explained in the following chapter of inclined figures.

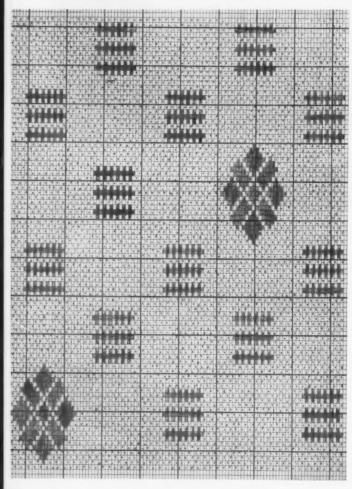
### **Inclined Figures**

Figs. 110a, b, c, and d are presented to illustrate the method of turning slanted figures in different positions within a rectangular space. By observing these diagrams it will be seen that the angle of the motif is turned away from the true vertical or horizontal line that characterizes the symmetrical figures which we have discussed in the foregoing chapters. The 45° angle of inclination is probably the readiest method employed for small figures.

In Fig. 110a the motif is contained twice in the repeat and both are turned in the same direction. A closer look at this arrangement reveals the diagonal lines it is liable to form in the cloth. Twilliness or any other form of bars in the decoration distribution is to be guarded against because they may impart a monotonous, undecorous look to the fabric. As a general rule an indiscriminate appearance is more desirable for it produces an all-over effect.

(Continued on Page 56)

Fig. 108—Dominant central figures and subsidiary spots in the space between them.

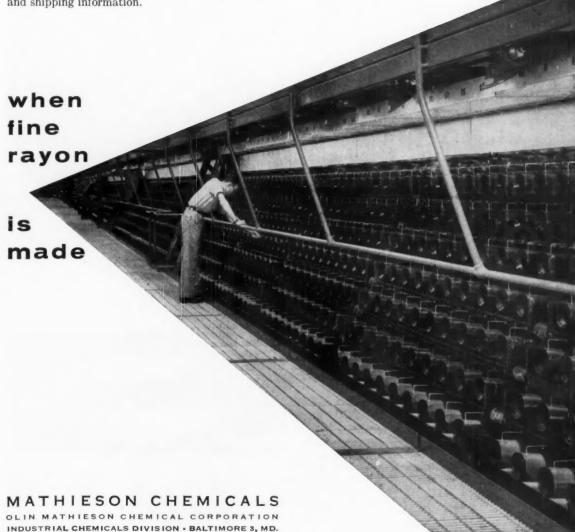


# Mathieson CAUSTIC SODA

### is there

Four plants from the Great Lakes to the Gulf deliver Mathieson Caustic in the quantity and quality specified, shipped on precise schedules to meet your operating requirements.

For rayon, special grades and high purity caustic are available. Caustic shipments come from Niagara Falls, N. Y., Saltville, Va., McIntosh, Ala., and Lake Charles, La., in 8,000- and 10,000-gal. insulated and lined tank cars. Call your Olin Mathieson representative for technical literature and shipping information.





INORGANICS: Ammonia • Bicarbonate of Soda • Carbon Dioxide • Caustic Potash • Caustic Soda • Chlorine • Hydrazine and Derivatives • Hypochlorite Products • Muriatic Acid • Nitrate of Soda • Nitric Acid • Soda Ash • Sodium Chlorite Products • Sulphate o Alumina • Sulphur (Processed) • Sulphuric Acid ORGANICS: Ethylene Oxide • Ethylene Glycols • Polyethylene Glycols • Glycol Ether Solvents • Ethylene Dichloride • Dichloroethylether • Formaldehyde • Methanol Sodium Methylate • Hexamine • Ethylene Diamine • Polyamines • Ethanolamines • Trichlorophenol • Surfactants





HERR Flyers produce light tensions at high speeds, perfectly balanced for accurate yarn control and reduced vibration.

Having problems with new fibers? Don't waste time experimenting. New

physical characteristics of the fibers require changes in the processing equipment to attain best results. Call Herr for the best Conical Ring and Traveler combination to give you complete control of new fibers and filaments. Write for information today!



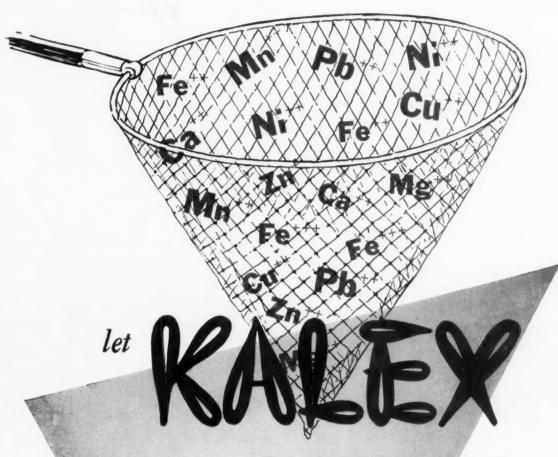
There is a HERR Conical Ring for the spinning or twisting of any yarn.

HERR

Manufacturing Company, Inc.

308 Franklin St., Buffalo, N. Y.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES



### clean up your caustics

Have you discovered the advantages of using Kalex compounds? In binding and deionizing heavy metal and alkali earth ions in caustic solutions, these water-soluble organic ion exchangers exhibit remarkable chemical stability at all temperatures. In fact, the effective sequestering properties of Kalex compounds permit their use in a variety of textile operations — kier boiling, bleaching, mercerizing, dyeing sulfur colors and wherever traces of iron, zinc, cop-

per, manganese, nickel, lead, magnesium and calcium are harmful.

KALEX E and KALEX IR are especially effective for complexing iron in caustic solutions; however, they also do an excellent job of chelating calcium, magnesium, copper, nickel and cobalt. Set in touch with us today and let us show you how KALEX products can improve your processes.

the Hart Products Corporation

1440 BROADWAY, NEW YORK 18, N. Y.

Works and Laboratories, Jersey City, N. J. Hart Products Company of Canada, Ltd., Guelph, Ontario

### Spot Designs (Continued from Page 52)

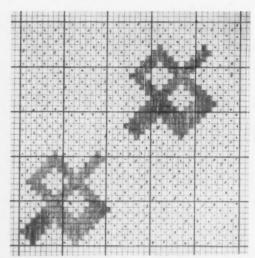


Fig. 110a—Slanted motifs turned in the same direction which may cause undesirable twilliness.

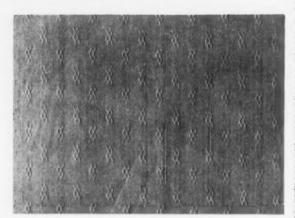


Fig. 110c-The fabric sample featuring the design of Figure 110b.

The proper arrangement for this design is shown in Fig. 110b. Here again the same two motifs are placed in the repeat, but due to turning the figure slant in opposition to each other a balanced effect is produced. The correctness of this arrangement is born out by the accompanying picture of the actual cloth sample that was woven with this design, in Fig. 110c.

Twilliness and other objectionable design formations are not always noticed in seeing one repeat only. It is therefore advisable to sketch out several repeats in both warp and in filling directions to bring to light any undesirable features while still in the planning stage.

Slanted figures have the advantage that the same motif can be employed a number of times in a repeat and each time in a different position. For instance, the motif previously used twice per repeat in Figs. 110a, b, and c is shown displayed four times within a repeat area in Fig. 110d. The unusual characteristic incorporated here is the four different positions of the motif. It will be noted in each consecutive position the motif is slanted an additional 90° angle. Although the figures in the diagonally opposite corners seem to

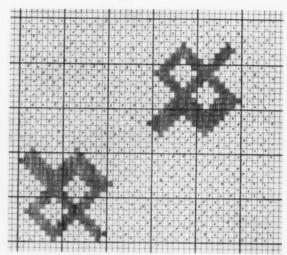


Fig. 110b—This illustration shows the proper arrangement for inclined

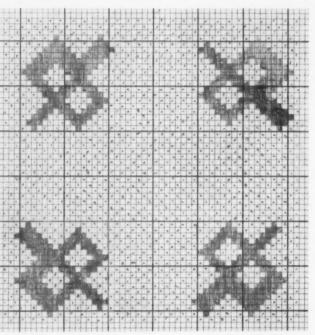


Fig. 110d-Pattern showing an inclined figure in four different positions.

point in the same direction, by close observation it will be seen that they are turned half way around in relation to each other. This particular design (Fig. 110d) is not suitable for production on a dobby loom, the reason being that it has too many differently weaving warp ends.

Occasionally, slanted figures are used in a eightharness satin distribution order. The motif is placed eight times in the repeat and it is alternately turned all four ways, each direction being used twice. This arrangement imparts a neat all-over effect but it has a very limited application as far as dobby looms are concerned. Unless the figures are very small, or the use of a repetitious harness draw is possible, such distribution requires a loom having a Jacquard head.

(Continued on Page 74)

### MACHINERY and EQUIPMENT SECTION

### MITCHELL-BISSELL Quality GUIDES



### NEW "TEXTALOX" GUIDES

Homogeneous Aluminum Oxide Composition

Extremely Hard <u>Throughout</u>, With Greater Wear Resistance
FOR ALL MODERN FIBRES . . . AND FIBERGLAS

Available in All MITCHELL-BISSELL Standard Patterns

Compounded with distinctive gray-green color for easy identification.

More economical . . . in first cost and through longer service life.

Samples on Request

MITCHELL-BISSELL CO. . TRENTON, NEW JERSEY

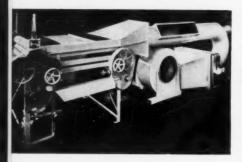
Southern Representatives R. E. I. Holf, M. & Associates, Jefferson Bldg., Greensboro, N. C.

MITCHELL-BISSELL CO:

\*TRADE MARK REG.

### New MACHINERY

### **New EQUIPMENT**



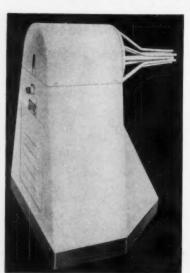
### Knit Goods Dryer

A new, patented tubular knit goods dryer, the Aero-Dyne Dryer, is now being manufactured by Joseph Pernick Co., Inc. The dryer operates continuously in a horizontal plane and requires relatively little floor space—about 5 by 16 feet. Fabric fed in rope form into the dryer, is dried by passing hot air over and through it in a series of opening discs and spreading arrangements whereby the dry width can be set to facilitate calendering.

For further information write the editors.

### **Detacking Machine**

A new portable detacking machine has been introduced by Curtis & Marble. Tested in actual mill production, the machine is reported to successfully operate at speeds up to 110 YPM, compared to a maximum speed of 25 YPM when detacking by hand. Only one

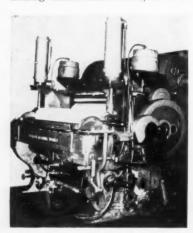


operator is required to handle goods as they come to the machine, which can be set to run at the same speed as the scutcher, the speed depending on the type of goods being processed. The ma-chine is mounted on casters and can be easily moved; it also can be made for mounting to ceiling or wall. Floor space required is only 24 by 28 inches.

For further information write the

### Pneumatic Lap Control

The new Long pneumatic Lap control system for use in textile mills, developed by Livingston & Haven, Inc., in cooperation with Westinghouse Air Brake Co. can cut production costs on certain textile operations by as much as \$20,000 a year in addition to reducing maintenance costs, accord-



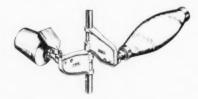
ing to Livingston & Haven, distributors of Westinghouse pneumatic devices. The estimated cost in savings has been based on advance reports from mills which have already put the system into operation.

This first all-pneumatic system is being installed on pickers. The fiber being used, whether baled or in staple form, is blown into the picker, which straightens the fibers and compresses them into a lap roll. The laps are then further processed and spun into thread and yarn. The new system, it is reported, can create greater compression which results in laps weighing as much as 90 to 110 pounds

For further information write the

### Swinging Package Arm

A new swinging package arm for magazine creels to meet the demand for equipment to accommodate the new heavier and longer yarn packages has been developed by Edward J. McBride Co., Inc.



The new arm has an adjustment to vary the swing radius while retaining the patented ball retent positioning lock. The bowed spring spindle can be replaced or repositioned without any dismantling.

For further information write the

### Improved Outerwear Knitter

Textile Machine Works has announced additional new features designed exclusively for the Reading full-fashioned outerwear machine to meet the growing demand for high styling and novelty fabrics in the full-fashioned sweater field. The new improvements make the machine capable of: knitting variable widths of lace design; knitting both continuous or interrupted lace panel designs; producing a boucle effect; combining lace and intarsia patterns; combining striped and intarsia patterns; preventing loss of production through jams by a safety stop motion; controlled narrowing spindles and double control automatic filler

For further information write the editors.

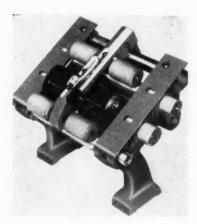


### Improved Abrasion Tester

Taber Instrument Corp. reports its Taber Abraser (Model 174) can quickly and accurately evaluate resistance to surface abrasion of materials under cold, wet and dry conditions. Taber dual abrading wheels, which traverse a complete 360 degree circle on the surface to be tested, are said to expedite the evaluation. A variety of holders

are supplied for testing sheer silks, textiles, metals, leather, rubber and linoleum for various industries using such materials.

For further information write the editors.



### **New Saddle Guide**

Dixon Corp. now has available its new super saddle guide. The company reports that nearly one million spindles of the 1954 model saddle guides are in successful operation, following their introduction at the show two years ago. The new super saddle guide incorporates not only all the advantages of the 1954 model but is said to eliminate all oil and all cap bars from the top rolls of the spinning frames.

For further information write the editors.



### **New Textile Motor**

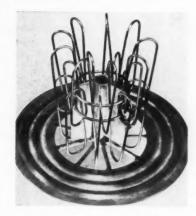
Diehl Manufacturing Co. has introduced a new fan-cooled motor reported to combine low maintenance characteristics of enclosed units with space-saving size of open frame motors.

Company spokesmen declare the totally-enclosed motor prevents ring-rail grease, dirt, threads, lint and drippings from entering the motor. Another feature of the motor is said to be its ability to operate at a continuous 15 per cent overload. The company claims it is adaptable to all types of textile machinery.

For further information write the editors.

### Rayon Cake Spring Tubes

R. & J. Textile Corp. has acquired sole distribution in the U.S.A. and Canada of the new Leti 4E rayon cake spring tube; Radia II/T, manufactured by Lebrecht Tigges K.G., Germany. The new spring tubes are reported to have about 30% more radial spring action, thus permitting use of cakes of different inside diameter.



Other features claimed are: swelling of rayon, cotton, wool, worsted and staple fibers absorbed without any yarn losses; a ring which forms an outer diameter corresponding to the inner diameter of the cake.

For further information write the editors.

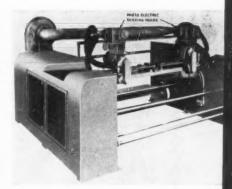
### **New Sweater Finisher**

Garment Finishing Equipment Corp. is sole marketing agency for the new sweater finisher, produced by Paris Manufacturing Co. It is claimed the Paris finisher can automatically press sweaters to exact size. The machine shapes and



presses all knitted fabrics, whether full fashioned or cut and sewn. Individual steam and drying cycles are used for natural fibers, synthetics and blends. The finisher handles the full range of sizes with only a single manual setting.

For further information write the editors.



### **Better Selvage Trimmer**

Hermas Machine Co. has brought out a new selvage trimmer equipped with a photo-electric eye for 2-way controls adjustable for varying cloth trimming conditions. It is said to achieve fine control to within 3/32" and can trim wire-loop selvages without cutting the loops and slack selvages without nicking the selvage. For further information a brochure may be obtained from the manufacturer.

For further information write the

### **New Thread Guide Offered**

A new homogeneous aluminum oxide material for thread guides has been announced by Mitchell-Bissell Co., Trenton, N. J. Tradenamed "Textalox," the new material is said to be longer wearing and harder. It was developed specifically to combat the abrasive action of modern synthetic fibers, including glass fibers.



Distinctively gray-green in color, it can be produced in all patterns previously supplied in porcelain by Mitchell-Bissell. Textalox is also said to be economical in installation and in long-term use. Samples will be supplied by Mitchell-Bissell upon request.

For further information write the editors.

### **AC Motor Selector**

A new 12-page Reliance motor selector bulletin, No. B-2103-1, containing complete information on how to select a-c motors for specific applications is available on request to the Reliance Electric and Engineering Co., 1088 Ivanhoe Road, Cleveland, Ohio. Two pages are devoted to a pictorial glossary of motor enclosure terminology. Reliance also has available bulletin No. B-2501, which describes a new concept in protected enclosures for a-c motors.



Fabrics . . . finished

venyon

For Arnel® finishing that meets the exacting specifications of The Celanese Corporation of America, rely upon America's leading finisher of fine synthetics. Kenyon know-how and the Kenyon program of rigid quality control are your assurance of the highest standards of excellence.

There is no Substitute for Kenyon Finishing!



### NEW FABRICS

### NEW YARNS

### Light Weight Flannel

A new flannel, soft and light in weight is now appearing in sleepwear made by Barbizon Corp. It is a blend of Dacron polyester fiber, cotton, Orlon acrylic fiber, and nylon and comes in petal pink and blue. Nightgowns retail at approximately \$10.00 and \$11.00 and pajamas at about \$11.00.

### Saran Furniture Fabric

Chic-Spun, a 100% woven saran fabric, has been developed by Lumite Division of Chicopee Mills for use in furniture upnolstery. It is offered in 12 patterns with 120 colors. Chic-Spun is washable, resisting stains, moths, and mildew.

### **Beaunit Fleece Fabrics**

Two new fabrics in the important fleece category, both fully washable with no shinkage and no need for ironing, have been added to its tabric roster by Beaunit Mills, Inc., New York City. The first is a lightweight all-nylon fleece, with a 52 to 54-inch width and available in various shades. The other is a 100 per cent Dacron fleece in the 48 to 50-inch width, offered in soft pastel colors and of a slightly lighter weight than the nylon. Both fabrics should find ready use in the sportswear field and infants' wear.

### Carpets of New Rayon

Carpets made with Super-L the new rayon carpet fiber, were displayed by American Viscose Corp. at the Chicago Merchandising Mart at the January exhibition. Super-L, the firm reports, wears 25% longer than regular rayon carpeting and soils 35% less

During the January market there were continuous showings of "Tagged for Quality," retail sales training film produced to inform store personnel about the firm's Avisco Integrity Program. American Viscose store demonstrators, in the last nine months, have exhibited coast-to-coast a model spinning machine showing how rayon is produced and visual displays illustrating how tufted rayon carpet is made.

In 1957 the integrity program will be expanded to include all home furnishings departments. An estimated 25,000,000 square yards of carpet eligible for the Avisco Integrity Tag were produced by the end of 1956, plus 600,000 bedspreads.



it's nothing but cloth . . .

### Yard Goods Sales — Profits for You?

PIECE GOODS departments generally seem now to provide an improved opportunity for the distributor of man-made fiber fabrics. However, this will require some work and thought. These departments have had their ups and downs, but there are strong possibilities that at least a moderate expansion in volume and a more substantial expansion in profits are within the reach of fabric distributors and retailers during the next few years.

Normally, piece goods sales over-the-counter fluctuate more or less inversely in relationship to the values available in ready-to-wear. When these values are particularly good from the consumer's viewpoint, this discourages home sewing and piece goods sales are handicapped. When ready-to-wear values are less favorable to the consumer, the reverse takes place.

Such cycles will probably continue in the future as they have in the past. Nevertheless, the expanding school population provides a growing number of potential customers who are receiving training in home economics and sewing. Meanwhile, the average age of marriage has declined substantially, and there are more young families who have young children. Thus, there is also an economic encouragement to home sewing which did not exist to the same extent even in the prewar period.

It seems likely that these encouragements to home sewing, and therefore piece goods sales, are a comparatively permanent part of our postwar economy. Marriage rates have declined recently, but will begin to rise again as the early postwar crop of babies begins to reach marriageable ages. Birth rates have remained high and the school age population is increasing more rapidly than many other age groups. It is therefore reasonable to ask:

What can textile distributors do to encourage the expansion of piece goods sales over the counter?

There are several important problems which textile finishers and distributors should recognize as handicapping their own sales in this market, as well as total sales to consumers. These can and should be solved. Two of the chief problems involve: Quality of piece goods; and the position of man-made fiber, and particularly non-cellulosic, fabrics.

### Quality of Piece Goods

If there is any place where minimum standards are desirable, it is in piece goods departments. The consumer's disappointment in a garment she has made from a presumably washable fabric which fades or shrinks in washing is even greater than that of a consumer who has bought a similar garment. In the latter case, there is a loss of money. In the former, there is a personal frustration and disappointment.

For home sewing, however, there is another requirement which is far more important for home sewing than it seems to be for industrial sewing; and it is a requirement which seems to have been ignored by many textile distributors and their finishers. This requirement is that the filling threads be perpendicular to the warp throughout the length and width of the fabric.

Off-grain fabrics have been a long standing source of complaint. Of all the problems and difficulties discussed in many consumer and home economics conferences, off-grain fabrics always have had a high place on the list. Many textile distributors may not recognize this, but it is a fact that:

- 1) The Bishop method of clothing construction, which has become increasingly popular, places great emphasis on accurate grain.
- 2) Many teachers will not allow students to use off-grain fabrics.
- 3) Off-grain fabrics are becoming an increasing source of complaints and returns to the retailer.
- 4) The increasing use of resin finishes, which make it difficult or impossible for the home sewer to straighten the fabric before cutting, is now exaggerating further the importance of this off-grain problem.

Keeping the warp and filling threads at right angles is a purely mechanical process in most finishing plants. It seems doubtful that very much is saved in

(Continued on Page 83)

### Value of Trade Associations

Trade associations, such as the Textile Distributors Institute, perform many valuable services for their members. Herbert Hoover, when Secretary of Commerce, called trade associations "the safeguard of business."

Walter Ross of Rosewood Fabrics, Inc., president of TDI, describes the value of trade associations in these words: "You have to realize that a trade association is an important adjunct to your business, like insurance. If at the end of the year you find that you paid X dollars insurance and did not have any losses, you do not question its value. A trade association is insurance against any move against your business. Your trade association is alert, watching out and keeping you informed while you are too busy to do it. You have got to realize that it is insurance for your business."

### REPORT FROM JAPAN



### Japanese accept cotton quotas without joy in hope they will save U. S. export market

By B. Mori

OSAKA—Japanese textile and export leaders here have accepted with disappointment approaching bitterness quotas on cotton goods exports to U. S. made public by their government in Washington Jan. 16. General attitude here is that Japanese textile export trade will swallow quotas as bitter pill in hope that these voluntary restraints will forestall possibly even more painful medicine in shape of U. S. tariff enactments imposing even more stringent limitations on Japanese textile imports into U. S.

What Quotas Provide—Effective for five years, new quotas provide overall ceiling of 235 million yards annually on cotton goods exports to U. S. This breaks down as follows: cotton cloth, 113 million square yards; made-up goods usually included in U. S. cotton broad woven goods production, 30 million; woven apparel, 71 million; knit goods, 12 million; miscellaneous cotton textiles, nine million. The limit for any of these five groups can be exceeded by ten percent as long as overall 235 million square yard limit is observed.

Gingham, Velveteen Limits Set—Within the limit of 113 million square yards for cotton cloth, the following limits are applicable: ginghams, 35 million; velveteens, 2.5 million; all other fabrics, 75.5 million. Within this last figure of 75.5 million square yards, the following limits are set: sheeting, 50 million; shirting, (80x80 type) 20 million; other shirting, 43 million; twill and sateen, 39 million; poplin, 25 million; yarn dyed fabrics, 24 million; other fabrics, 44 million.

The quota agreement provides that limits for ginghams and velveteens shall apply for the first two years of the quota period. Limits on these fabrics for following years are to "be determined through consultation taking into account all factors relevant at the time of such consultation".

**Blouse Quota Also Fixed**—Within the "woven apparel" category the agreement limits blouses to 1.5 million dozen as compared with a 1956 quota of 2.5 million dozen. Sport shirts are fixed at 750,000 dozen compared with the former quota of 850,000 dozen. The Jan. 16 agreement also fixes limits on dress and work shirts, 300,000 dozen; brassieres and other body supporting garments, 600,000 dozen; shorts and trousers 600,000 dozen.

Knit goods limitations include men's and boy's T-shirts, 500,000 dozen; gloves and mittens, 450,000 dozen; other knit goods, 1,477,000 pounds. In made-up broad woven goods, the limitations are: pillowcases, 400,000 dozen; dish towels, 800,000 dozen; handkerchiefs, 1.2 million dozen; table damasks. \$3.72 million and 1,857,000 pounds of other items.

It is estimated that the overall limitation of 235 million square yards fixed by the agreement amounts to roughly two percent of total U. S. cotton goods production. In 1955, the latest year for which figures are available, estimated Japanese exports to U. S. were 270 million yards.

Fix Export Quotas for Canada—Quotas on exports to Canada for 12 months beginning Feb. 1 have been fixed by Japan Textile Products Exporter Association. Pillowcases, jackets, trousers, slacks, knit underwear have been added to list of items which already contained blouses, sport shirts, table linens. Quota quantities are: pillowcases, 180,000 dozen; trousers, slacks, jackets, 300,000 dozen; knit underwear, 400,000 dozen; blouses, sport shirts, 350,000 dozen.

Canadians Angry Over Quotas—Swift and unhappy reaction of Canadian garment manufacturers to quota figures was noted with uneasiness in Japan, particularly by officials of Ministry of International Trade and Industry in Tokyo. According to reports here Canadians were angry at substantial amounts of Japanese apparel quotas allowed to be shipped to limited Canadian market.

(Continued on Page 85)

### PAPERS OF THE

# AMERICAN ASSOCIATION FOR TEXTILE TECHNOLOGY INC.8



AATT

## textile gains in 1956

By J. B. Goldberg

During last year a rich variety of new developments in textiles was reported. Here is a summary, world-wide in scope, of these new things in every area in textiles

### FIBERS AND YARNS

### **Natural Fibers**

Early in the year the U. S. Dept. of Agriculture announced plans for a \$1 million research program to make cotton and wool more competitive with the man-made fibers. Among projects launched was one to investigate the effects on cotton of high-energy radiation, primarily to determine whether irradiation might be used to make useful new textile products from cotton or to increase its value in present uses.

At the same time it was planned to determine if the polymerization of monomers on cotton fabrics could be made more durable by such treatment. Continuing studies disclosed progress in creating new cotton varieties, such as "Stardel", a high strength, high yield fiber, developed at Louisiana State University.

Most research efforts on behalf of cotton were directed at chemical alterations to produce fibers or fabrics with new and diverse uses. Textile Research Journal carried reports on modifications effected by reaction with beta propiolactone. A joint publication of the Institute of Textile Technology and two producers of acrylonitrile disclosed latest techniques developed for batch and continuous cyanoethylation of cotton, and discussed the economic aspects of these treatments.

Expanded use for jute in bags for fertilizers was the goal of the British Jute Trade Research Association which recently proclaimed success in treating jute fabric to impart acid resistance. From Australia came word of a new sheep shearing system which relied on the use of a chemical spray to stop wool growth for three days, breaking the fibers and permitting stripping of the wool by a special machine. The idea of stopping wool growth would probably horrify the New Zealand scientists whose experiments in feeding sheep selected hormones resulted in an increased fleece growth of 13.5%.

Australian wool chemists are also credited with developing procedures for rotproofing cellulosic materials and imparting mothproof and rot-resistant char-

acteristics to wool by use of oxidizing and coupling techniques. Professor Speakman of Leeds University reported that wool fiber quality is associated with plasticity and tyrosine content and suggested possible control of quality by choice of rams for breeding. Another romance between the natural and the synthetic, even if the wedding is called off, was hinted at in an English report which described an improvement of wool's abrasion resistance accompanied by a reduction in milling shrinkage through deposition of polyacrylonitrile in the fiber.

### Man-Made Fibers

The breathing spell enjoyed by most mill men, dyers and converters during 1955 when promotion of new man-made fibers remained dormant was rudely interrupted during the past year when a number of the incubator babies raised their voices all at once. First came Eastman Chemical Products, Inc. with Verel, a modified acrylic staple, presumably the com-

Following graduation from M.I.T., J. B. Goldberg gained his early textile experience at the Celanese Corporation of America and the Slater Mills. He joined J. P. Stevens & Co., Inc. as Research Director in 1937, resigning In July, 1953 to engage in private consulting practice for the textile and allied industries. Mr. Goldberg, a Fellow of the Textile Institute, is an active member of many technical organizations and has presented a number of papers both in the United States and abroad. He is also the author of the book, "Fabric Defects", and publishes "Textracts", a monthly summary of textile news.



J. B. Goldberg

Paper presented at Jan. 2. meeting AATT.



OFF TO DREAMLAND ON A CLOUD—In this case it's "Celacloud", Celanese's acetate "sleeping" fiber. The young lady's pillow, comforter and mattress are filled with this new material said to be light weight, springy, non-allergenic.

mercial version of their M-series of fibers sampled in earlier years. Freedom from static, exceptional whiteness, higher moisture regain and inherent resistance to flammability were stressed as advantages not offered by all other existing acrylics.

Next came an announcement by Dow Chemical Co. of Zefran synthetic staple, described as a "nitrile alloy" and said to possess exceptionally good dyeability with a range of dyestuffs generally used on cotton or rayon.

Advances in Orlon product improvement were revealed by Du Pont in presenting a whiter, more dyeable staple and tow, as well as 1-denier fiber for fine count yarns, coarse deniers for other applications and a spun-dyed black staple. Although production of continuous filament Orlon was officially discontinued, there were confirmed rumors of a more dyeable version of this yarn undergoing mill evaluation tests. Indicative of the fiber producers' whole-hearted support of basic studies to increase their markets was the declaration that research and development on Orlon alone would cost \$8 million in 1956 with \$3 million allocated to marketing assistance.

A few months ago American Viscose Corp. reported plans to make heavy denier high tenacity yarns with filament sizes of 1.0 to 2.25 denier per filament. Setting the world on fire was certainly not the hope of any manufacturer of man-made fibers since the Celanese Corp. was said to be making a fire-retardant acetate in both natural and solution-dyed filament yarns while Eastman supplemented their line of Verel acrylic fibers with a type "FR" claiming it to be the most flame-resistant organic fiber known to man.

Emphasis on ways and means for imparting or improving bulk in fibers and yarns seemed to hold the limelight as Carbide & Carbon Chemicals Co. offered a Type 63 Dynel with controlled high shrinkage, and suggested applications in blends with cotton to give more warmth in fabrics without weight, while Celanese started production of bulked filament acetate yarn.

A new rayon tow which develops a permanent crimp when wet with water was introduced by the American Viscose Corp. with markets anticipated in drapery and pile fabrics. Last October Celanese launched Celacloud acetate staple in several deniers for providing lofty filler for mattresses, sleeping bags, pillows and comforters. Another more recent newcomer was Eastman's 50 hollow-filament acetate yarn said to contribute greater loft and cover than yarns with conventionally shaped filaments.

Du Pont made spun-dyed black nylon available commercially as well as heavy denier monofilament yarns for selected uses. Allied Chemical expanded its range of heavy denier Caprolan nylon yarns and produced limited amounts of 200 denier yarn. An improved solution-dyed carpet rayon staple with more harshness and additional crimp to increase crush-resistance was identified as Kolorbon by the Hartford Rayon Company. Last month American Viscose's Super-L rayon staple was publicized as a fiber especially designed for loop-pile carpeting. Superior soil resistance attributed to a smooth surface, and increased durability were the two outstanding claims made for this new product. Also aimed at capturing some part of the large carpet market was a new lofted heavy-denier continuous filament acetate yarn by Eastman.

For circuit identification for radio and electronic hook-up wire, aircraft and Navy cable, Libby Owens Ford Glass Fibers Co. introduced Teflon coated and glass-Dacron yarns in eight standard colors. Owens Corning Fiberglas Corp. offered a plied yarn of Fiberglas and Dacron for insulating wire, the Dacron being subsequently fused by heat. Improved polyethylene filaments possessing strength and abrasion resistance comparable to nylon with lower specific gravity as an added attraction aroused new interest here and abroad. Among other fiber-forming materials under investigation by research chemists were alkaline-soluble thiourethene cellulose derivatives and nylon 4.

New foreign entrants in the man-made fibers' field included two from Japan. One was described as being synthesized from castor oil, coal and petroleum with claims of a lower density than nylon, superior dyeability and greater heat-resistance. The other was a polyester using waste water from sulphite pulp production and boasted of more elasticity than wool but less than nylon, with a higher density and greater hardness than nylon.

Some scientists who must keep awake by consuming large quantities of coffee solved the problem of what to do with some of the waste material by dreaming up a synthetic fiber derived from coffee husks and claimed to be superior to nylon. "Danulon" and "Pannacril" were the names assigned to Perlon and acrylic type fibers respectively originating in Hungary.

The French Rhodiaceta Co. introduced "Trialbene" triacetate yarn. East German scientists disclosed nothing more than the name "Lanon" for a new "wool-like" fiber with high insulating properties. Japanese producers continued to show interest in manufacture of polyvinyl chloride fiber, Teikoku Rayon Co. revealing plans for the output of about 5 tons daily of "Tevilon" principally for industrial uses.

A unique process for improving the heat resistance of polyvinyl alcohol fibers was suggested in a report of experiments with the application of deutron or cobalt-60 gamma rays. The grafting of acrylonitrile onto nylon was described in an English publication with the thought expressed that such modified fibers might combine the desirable properties of both components. Italian-born "Novil", derived from acetylene, boasted of resistance to micro-organisms and flame, the handle of wool and excellent insulating properties.

In October, a Swedish producer announced development of an acrylic fiber, "Tacryl", and last month the Dutch Nyma Rayon Works stated that they planned to manufacture "Nymplex", a new yarn based on Ziegler process low-pressure polyethylene. Considerable publicity was given to the disclosure of experimental work carried out in Italy on isotactic polymers which might be equal to or better than existing fibers but probably cheaper. Low melting point, poor light stability and low yields were drawbacks still to be overcome. Further attempts to eliminate the pilling of fabrics composed of spun nylon yarns were outlined in a foreign article covering experiments with star and ribbon shaped filament crosssections, a technique also investigated some time ago in this country. Plans of Imperial Chemical Industries to produce a new 15 denier 3 filament Terylene for hosiery were published in December.

The literature contained references to domestic and foreign inventions for giving a scale-like roughness to the surface of polyacrylonitrile fibers; for improving the light-stability of polyamides by use of a chromium salt, and the imparting of superficial irregularities to partly coagulated filaments by vibration effects. American Viscose obtained patents on use of minute quantities of boron to identify manmade fibers and on a process for the surface acetylation of regenerated cellulose fibers.

Eastman disclosed creation of a cellulose ester yarn consisting of a plurality of filaments with clover-leaf and Y-shaped cross-sections. The incorporation of an inhibitor in acetate yarns to prevent gas-fading was the subject of an invention of Celanese last March, and reduced water imbibition of regenerated cellulose rayon was accomplished by a unique vapor treatment, according to a British patent assigned to Courtaulds. Ltd.

Another British patent issued last month described fiber-forming superpolyamides with high heat resistance. A German inventor revealed a method for reducing soiling tendencies by treating many types of fiber with certain wax-like organic compounds to smooth the surface. Chemstrand Corp. originated a composite textile yarn comprised of a hydroscopic core of continuous filament rayon and a hydrophobic wrapping of an acrylic spun yarn, suggesting use in barrier type textile materials. Means for overcoming stitch pucker was recorded by the Cluett Peabody Co. A water-soluble polyvinyl alcohol yarn was plied with another of water-insoluble material, the subsequent removal of the soluble portion apparently leaving the remaining yarn with more freedom of movement.

### MANUFACTURING METHODS AND EQUIPMENT

### Fiber and Yarn Processing

Continuing efforts were made to improve cotton cleaning. An experimental model carding cleaner designed by Southern Regional Research Laboratory engineers was able to remove up to 70% of trash content while processing 400 pounds of cotton an hour. The Lummus "Pepper-Shaker" Opener, utilizing three beaters, each with 380 spikes whipping the cotton over smooth round grid bars without damaging the stock, was said to be effective for the removal of fine pepper trash.

Reduction in doffing time and lap breakage were among the advantages claimed for the Long pneumatic lap control system, while the possibility of doffing fibers from a cotton picker lap into a gentle



FIRST FRUITS—One of the first end products made with Verel, Eastman's new modified acrylic fiber, are these men's socks made by Holeproof of Verel and cotton. They will be seen in stores this spring. Both ribbed and hound's tooth styles sell for \$1.50

air stream, then aligning them electrostatically for subsequent twisting into a yarn, was explored by scientists at the Southern Research Institute. The "Moisture Monitor" was the name given a device perfected by Kendall Mills to sense change in cotton moisture content and indicate the size of weight needed to correct for moisture content of a full lap.

The Southern Textile Machinery Co. reported the development of a new five-roll double draft system claimed to give drafts of up to 100 without the use of cradles and aprons, while a new Armstrong antistatic roll cover for frames equipped with flat or revolving clearers allowed for the rapid flow of static electricity from the cover to the steel drive roll, eliminating lapping and reducing waste.

Further developments in sliver-to-yarn spinning were seen in the Whitin "Monarch" frame for the economical production of coarse yarns, ideally suited for tufted carpeting; the Saco-Lowell SG-3C for cotton or synthetic drawing sliver of not over  $1\frac{1}{2}$ " staple length and best for yarns below 12's, showing strength increases of up to 20%; and improved Japanese O-M roving-to-yarn and sliver-to-yarn frames. Undergoing mill tests in North Carolina, a variation of the Casablanca system was said to yield better quality yarns at a lower production cost.

Chemical heat bonding-welding agents were used in a revolutionary spinning and weaving process, eliminating slow drawing operations and making a fabric by laying a plurality of filling yarns across the warp without interlacing, the bonding agents being later removed during finishing. Pneumafil Corp. entered production of a bobbin holder designed to maintain desired yarn tension, doing away with roving stretch and preventing roving slough-off without use of drag arms.

Further evidence of mill-engineering improvements was seen in a published description of a new bobbin stripper developed by Pepperell's Lindale Mill. Equations for predicting carded cotton yarn strength, card web nep-count and picker and card waste based on improved met ods for the evaluation of raw cotton quality were sented in a U. S. Dept. of Agriculture bulletin last April.

The French "Nomatex" double twister, intended primarily for the tire cord industry but also used for lighter yarns, accommodates all counts from 10's to

0.6's and produces packages of up to 11 pounds. Featured were reduced waste, improved efficiency and take-up speed of as high as 80 meters per minute. For larger packages of yarns of all sizes and types, the Fletcher Master Duplex Doubler-Twister had ring sizes increased from 5" to 6" and spindle whorls providing greater belt contact allowed production of packages as large as 5 pounds.

U. S. Textile Machine Co. exhibited a new two-pound doubler twister for processing zero twist yarns at 8,000 r.p.m. inserting one turn and doubling and twisting from cake to package. The Whitin-Schweiter "Fil-Master" filling bobbin winder, operating at up to 10,000 r.p.m., incorporated a new dust exhaust system and formed tail-less bobbins, eliminating scissor and tail cutter. Sloughing off was prevented by a variable layer locking traverse.

A number of spinning frame improvements were made during the past 12 months, but this summary will cover only a few of those which were recorded. For maximum efficiency on all fibers up to 2" long, the Whitin "Unitrol" center suspension weighting unit enabled the holding of top rolls in correct, exact



CARD GAME—Using a miniature Davis & Furber card, this man is blending various colors of Hartford's "Kolorbon" solution-dyed rayon carpet staple. This fiber comes in 13 basic colors which can be blended to produce vivid variations and original shades.

alignment with self-contained spring weighting mechanism. Saco-Lowell's "Tru-Set" top arm also utilized springs to apply roll pressure. A new Roberts 25″ spinning frame with drafting range of from 10 to 60, suitable for yarns up to 100's, has the advantage of requiring 25% less floor space.

Production of stretch yarns by false twist techniques gained further acceptance and details were given of several new pieces of equipment, including one by Valco Machine Co. of New Jersey, and Universal's "Superloft" Machine which combines into one continuous process what used to be a seven-step operation. A 216-spindle unit turns out over 400 lbs. of 70-denier stretch yarn a week. Heberlein's new high-speed false twist machine was claimed to operate at over 100,000 turns per minute.

From England came word of the new "Megaflex" spinning frame to meet the demand for high speeds and drafts, large packages and reduced floor space. Platt Bros. MR-3 all-purpose ring frame providing reduced end-breakage rates, improved spinning conditions, lower yarn tension and better yarn balloon throughout the whole package build. The Italian

Ratti Type CN winder was said to give vibration-free running at high speeds with thread tension kept as low as 0.1 gram per denier even at maximum speeds.

Two winding improvements by the English Muschamp Textile Machinery Co. were a special quill stacking device for the single spindle automatic quill winder and the "Combi" automatic quill and spool winder. The Stubbs "Dubrake" multi-end cheese winder was designed to wind at 800 yards per minute, claimed to be the highest production speed known for this operation. An Italian high-speed pin-drafter operated at 90 meters of long-fiber sliver per minute, using only about one-third the floor space of conventional units. Also from Italy, exhibited recently in Milan, was the "Spin-Electrol" described as an electronic mechanism to keep yarn tensions constant, fitting all spinning rings and adjustable to all speeds. A redesigned narrow worsted card by Platt Bros., Ltd. raised output per square foot of floor space by using a narrower driving belt with a higher friction coefficient.

### Warping, Slashing, Weaving, Knitting

Shown at the Greenville exposition were a cotton warper for 40" section beams operating at up to 1,000 yards per minute and a high-speed dye beam warper with pneumatic cylinder for beam density control. Originating abroad, the Schlafhorst dual purpose warper with direct beam drive and stepless speed control, suitable for preparing section beams or soft beams for dyeing, became available in this country.

The Cocker "Size Master" was presented as a new concept in controlled penetration and coating warp yarn. Air trapped between fibers is squeezed out before entering the size bath and an "Auto-Positioner Roll" automatically compensates for speed changes by synchronized changes in position and pressure of the top rolls. Automatic moistening and temperature maintenance on the rubber finishing rolls are said to greatly reduce lapping and napping. The Swiss Rutti hot air sizing machine utilizes air streams both above and below a sheet of sized warp, freeing the yarn from tension and giving maximum drying efficiency and great economy in space required as well as a high outout.

Among the scores of machines exhibited at Greenville were Crompton and Knowles "MP" automatic bobbin-changing dobby cotton dress goods loom, a type convertible from 1x1 to 2x1 and a 36-bobbin capacity rotary magazine with vacuum control away from the loom; also, a new Draper X-2 model for weaving fine cottons and synthetics, an XP-2 sheeting loom operating at 142 picks and a 50" X-2 for spuns with a new automatic filling magazine eliminating the rotary type battery.

A study of polyvinyl alcohol sizing, completely hydrolyzed and of high viscosity for cotton, spun Dacron and Dacron blends with cotton or rayon was reported on in a recent issue of the Textile Research Journal. In May a patent was assigned to the Deering Milliken Research Trust on the use of this material along with at least 35% of an aliphatic alcohol, eliminating the need for high temperature drying.

Circular weaving machines continued to be under investigation, one of Irish origin incorporating a rotating bowl or clock face with filling carriers magnetically attached at "5-minute" intervals. Six picks are inserted at one time and the selvage is formed by a tucked-in end. A new French loom, not expected to be available commercially for several years, has a triangular shaped shuttle, feeding from large bobbins.

Further information was released on the Czech jet loom, picking by means of an air jet at speeds of 800 picks per minute. Of German design was a loom for simultaneous weaving of four carpets of equal size and up to three yards in width. A Czechoslovakian machine builder was reported to be developing a heavier model shuttleless loom first exhibited a few years ago. Operation is by a water stream to draw in the filling at a high speed.

Kiddie developed a 10-bar raschel unit especially for laces and edge fabrics and a new tricot warping unit allowing easier doffing by hydraulic means and yielding better quality beams. High speed production of knitted pile fabrics was made possible with a new attachment offered for raschel machines by Karl Lieberknecht. Widths up to 100" can be knitted at 26 running yards per minute with fabric stabilized in any direction. Fabrics as fine as hair nets and as coarse as carpets can be made. It was estimated that one operator could operate four machines using a conventional type warp beam.

The new 84" FNF "Super" warp knitting machine boasted a cruising speed of 1250 courses per minute and cloth removal was possible without stopping of the machine. The Reading tricot machine, made available commercially a short time ago, uses eccentric motions and a construction which permits a speed of 800 c.p.m. The constant motion of the needles reduces necessary swing of the guide bars by about 30%. Also newly introduced was a Scott & Williams interlock unit for automatic knitting of sweater body and rib. To detect defects in knit goods, Lindley & Company developed a photo-electric scanner which covered 168" width goods in one second. A new Swiss Schiffli embroidery machine made its American debut about three weeks ago.

#### FINISHED GOODS

### Dyeing and Finishing

Apart from the usual large number of dyes and chemical assistants marketed for wet processing of textiles, the parade of new application techniques and equipment attest to continuing progress in dyeing and finishing.

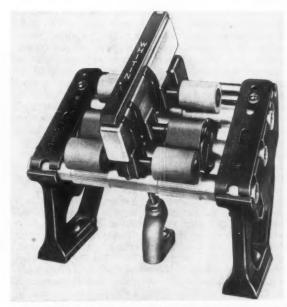
The Becco Ultra-Rapid or "flash" hydrogen peroxide bleaching procedure for cotton fabrics was effective in cutting bleaching time to a matter of minutes. The Du Pont "Solomatic" single-stage continuous system promised to reduce bleaching costs by as much as 20% and afforded doubled productive capacity without the installation of additional equipment. Whiter bleaches with a marked reduction in peroxide used were claimed possible by use of a sealed circulating pressure system made by the Morton Machine Works.

Cheney Brothers sold to Du Pont the "know-how" for applying acid and "Capracyl" dyestuffs to woven filament nylon fabrics in covered jigs, resulting in dyeing uniformity normally obtained with dispersed colors. Improved light fastness and savings in the amount of dye used were additional benefits. Also aimed at the improved dyeing of nylon, Chemstrand's "Chemnyle" process using 2% of a new compound, was proclaimed as a novel means for obtaining the level dyeing of continuous filament nylon in package, stock or piece goods form with selected acid and direct dyestuffs. Tests indicated that dyed fabrics exhibited good resistance to washing at 160°F. and 212°F. as well as increased lightfastness. A Paterson concern presented a new line of patented water-sol-

uble acetate dyestuffs which can be padded on acetate and nylon piece goods economically with superior results.

Continuous pad-dyeing of carpeting became practical with the introduction of a specially built Rodney-Hunt "Niptrol" mangle with a 17½ foot roll face. Pressure is applied by a pneumatic tube running the full width of the machine and a smaller diameter nip roll gives greater extraction. Trial runs showed excellent penetration, uniformity and absence of side to center shading. For dyeing Terylene, Imperial Chemical Industries, conceived the "Vapocol" method, a process involving padding of the dye liquor, drying and immersing the fabric in saturated trichlorethylene vapor, followed by removal of the solvent in boiling water for 30 seconds.

"Procion" colors, made by this company, were said to provide high wet fastness through the formation of a chemical bond between the dye and fiber. Reaction



FOR CORRECT ALIGNMENT—Whitin's "Unitrol" center suspension weighting unit holds top rolls on spinning frames in exact alignment by means of a self-contained spring weighting mechanism

with cellulose fibers proceeds rapidly under alkaline conditions, permitting cold dyeing in conventional machinery. For the do-it-yourself addict, a Cincinnati firm introduced an aerosol dye bomb, making available 16 colors for refinishing upholstery, rugs, awnings and similar articles.

Last Fall Du Pont demonstrated their "Savagraph" printing process for cellulosic fibers, employing a new line of "Vantasol" vat colors. Vat dye pastes are compounded into water-in-oil emulsions, with printing and drying carried out on standard commercial equipment. Only mild soaping is required to provide good fastness and the prints are claimed to exhibit greater brilliance and to have a dyed rather than a printed effect. The "Aura" process for obtaining multicolor prints with a different shade or color for each half inch of width on one roll was shown to the trade in this country by Keystone Laboratories of Canada. Sharp definition of colors is achieved through use of a special feed attachment and extra printing cost is



GOOD FOR CARPET YARNS—This new Whitin Monarch sliver-toyarn spinning frame is designed for economical production of coarse yarns such as those used in tufted carpets

estimated at 1½ to 2¢ per square yard. An English concern developed a machine for printing three colors simultaneously on both sides of flat-folded circular knit fabrics at a rate of two yards per minute.

Riegel Textile Corp. engineered their own flash-acid ager, a small, compact, low-cost machine geared to the take-off end of the print machine dry cans and operating at all printing speeds. "Velveray Tuftone" was publicized as a novel flocking technique to give a 2 millimeter pile height, a new resin binder affording washability at 120°F., good pliability and improved resistance to dry cleaning.

Among patents pertaining to finishing issued during the past year was a British one describing means for reducing the water absorbency of cellulosic materials, at the same time improving dimensional stability. Another British patent, relating to crease-resistant linen, suggested that the resin be made insoluble by a saturated steam treatment instead of baking, thereby eliminating the need for after-treatment with acid, after-mercerizing or soaping-off. Du Pont patented a method for rendering acetate taffeta fabric insoluble in acetone and ironable at cotton temperatures and the Cravenette Co. invented a method for rendering web material water-repellent and enhancing its heatinsulating properties by applying a coating containing a polyamide resin, zirconium salt wax emulsion and a bright-surfaced metal, then drying and curing.

A patented process shown at the Leicester Exhibition in England described the application of a conducting dilute salt solution to cotton goods followed by electrical treatment which results in making the fabric completely and permanently water absorbent, the complex wax or oil films being readily penetrated. Another English process was that of dyeing woolen knitwear in two-tone or two-color effects in one dye bath with good fastness to light and washing.

Minnesota Mining & Manufacturing Co. announced its "Scotchguard" chemical finish, resistant to both water and oil-borne stains. An English publication carried information on a new polyvinyl pyrolidene stripping auxiliary with excellent stability in hard water and unusual conditions of acidity and alkalinity associated with dyeing, and procedures were outlined for use in stripping vat, sulphur and direct dyes and prints.

To combat odorous amine compounds originating from urea and melamine formaldehyde resins, Textile Adjuncts Corp. offered a special chemical additive which was also said to give more uniform resin deposit and eliminate the need for after-scouring. Epoxy resins for crease-proofing cottons were described at the National Cotton Council Chemical Conference and showed promise in eliminating problems of odor and chlorine retention. Cellulosic fabric deterioration by weathering was supposed to be effectively stopped by a newly developed copper compound solution which formed a permanent chemical bond with the cellulose. Phosphorylamide was introduced by Wica Chemicals, Inc. as a permanent flame-proofing compound for cellulosic fabrics.

Germ conscious consumers concerned with contamination from garments, even when fabricated of the natural fibers, can now find happiness and sanitary security in a wide variety of textile products treated with germicidal or antiseptic wash-resistant finishes. One of the older, most widely used treatments appeared to be gaining even broader acceptance for its reputed effectiveness in destroying odor-forming bacteria in perspiration.

Durable anti-static finishes for certain textile materials were introduced by Carbide & Carbon under the name of "Niatex", but usefulness on the newer synthetics was limited to those whose filament cross-sections were irregular rather than smooth. Preliminary data was released on Onyx Oil & Chemical Co.'s "Aston LT" anti-static compound indicating that it was both effective and durable on all fibers.

At the Hanover Fair were shown a high temperature dyeing machine for piece goods with the material kept at rest during the entire process, even though the dyer might be ill at ease; also, an open width continuous dyeing range and a new Swedish dye jig. The use of molten urea as a dye transfer medium was described at a meeting of the British Society of Dyers and Colourists with particular advantages noted for tightly woven fabrics. In Italy an international meeting of textile chemists and colorists featured discussions on advances in dyeing and printing, the theory of color measurement and the swelling of fibers.

The James Hunter "Uniflow" single process dryer was said to have an evaporation rate of 50 to 100 lbs. of water per square yard of cloth and to insure even drying from side to side, eliminating color migration and damp selvages. The Vits "Lay-On-Air" dryer, made in Germany and now available in this country, uses a forced convection system of drying with higher temperatures permitting, drying, curing and polymerization in one pass.

From New England came a description of the printing of cotton, rayon, synthetic or glass fabrics on wallpaper print machines at 50 to 60 yards per minute with hand-blocked effects, no prescouring or washing required. An unusual method for obtaining interesting surface effects which might be utilized to consume considerable yardage of fabric by destruction was one which involved sandblasting, but it was admitted that the removal of sand particles presented a problem to be investigated. The Turbo Machine Co. announced development of new shearing and swabbing machines as well as one for finishing the popular fur-like pile fabrics of acrylic fibers.

In January a patent was issued to Dr. C. Hatay on means for fabric finishing to reduce shrinkage by applying to the material in a lax condition localized impacts at a plurality of points along the surface. Earlier preliminary reports on this process indicated the use of high frequency vibrations.

Developed by the Fabric Research Laboratories, Inc. a new Riggs & Lombard machine, capable of handling a wide variety of fabrics, effected stabilization mechanically by a compacting operation. It was reported that most interesting applications included the achieving of bulky or texture effects; elimination of the need for the sponging operation before tailoring garment fabrics, and for the continuous light fulling of woolen fabrics. Improved methods for controlling knit goods shrinkage by the Redman process were in the development stages, and the "Sanfix" Swedish-made machine was said to use hot coil springs to compress knit fabrics and impart stability against shrinkage.

### New Developments in Fabrics

What was described as an "imitation suede" fabric went into commercial production abroad. Basically, this fabric was a plain interlock knit with yarns composed of a blend of thermoplastic Rhovyl with rayon, acetate, cotton or nylon. Shrinkage in hot water results in a dense and thick loop construction which is then sueded on one side, followed by a waterproof treatment to make the finished product suitable for outerwear.

Also in the category of "imitations", since the term "fur-like" is frowned upon by the purveyors of true animal pelts, is a new 100% knitted Dynel coating fabric claimed to be more lustrous and better draping than sealskin. Somewhat of a compromise between the natural and synthetic was "Fur-Nel", a fleece made of a blend of beaver fur and Dynel with attributes of greater softness, luster and draping qualities than similar materials made by combining fur fiber with wool. Chagrined at the thought that wool might be overlooking this lucrative market, two English scientists reported that they were able to produce an "artificial fur" with two heights of pile, using treated and untreated wool and hair with differential contracting powers simulating coarse hair outercoat and fine fiber undercoat.

A new outlet for filament rayon was seen in the development of a denim utilizing vat dyed cotton warp and solution-dyed "Jetspun" high tenacity rayon in the filling. The price differential was supposedly justified by superior strength, abrasion resistance and colorfastness.

Minimum care fabrics of rayon were discussed at the annual meeting of the Textile Research Institute, with preliminary data indicating that under controlled conditions resin-treated goods were stabilized, possessed fairly good crease-resistance and reduced water imbibition, all of which contributed to the making of minimum care washable rayons a reality. While no reports have yet been released for publication, it was rumored that considerable advance has been made on this project by chemists of a number of rayon producers working cooperatively on finishing problems.

Still determined to retain the large market originally captured by man-made fibers, when the advent of tufted rayon constructions provided serious competition for wool, many fiber manufacturers have been engaged in extensive research to create the ideal fiber for floor covering. Early in the year the Industrial Rayon Corp. exhibited a wide range of spun nylon carpeting made possible by new yarn twist-setting processes. Twist variations permitted many novel textures on both woven and tufted constructions. In December news was released of various new

woven and tufted carpetings of specially developed Acrilan, Dynel and Du Pont nylon fibers, stressing resilience, freedom from matting, easy cleanability and exceptional wear-resistance.

A patent issued to Beaunit Mills described a flameresistant brushed fabric composed of a backing of a normally inflammable yarn, a facing capable of being napped made of two different yarns, one of which was Saran, to impart flame-resistance.

Terylene hosiery made its debut in England last year with a greal deal of interest expressed by many knitters. Emphasis was placed on the facts that the hosiery had the strength and durability of nylon but appeared sheerer and also resisted deterioration from corrosive agents. The latter condition has been encountered from time to time in isolated areas where atmospheric fumes containing minute quantities of acid have been held responsible for the sudden appearance of mysterious runs. Keen competition in the stocking market in Germany resulted in the promotion of nylon hosiery with a seam down the side, giving a seamless appearance in the back and front.

Typical of research being carried out to find methods of improving fabric properties by chemical treatment was a patent issued on a buffing wheel made with a plurality of woven fabrics impregnated with polyethylene glycol of specified composition. Also in the industrial field, non-woven textile materials comprising multiple layers of Dynel were seen of importance because of inherent high chemical resistance and dimensional stability.

Nylon coated fabrics, well-established in tarpaulins, found a new outlet in a so-called "portable" store, entirely supported by air, and constructed of a lightweight, tough vinyl-coated fabric. Another contender in the tarpaulin market was a fabric woven of Fortisan-36 laminated between vinyl coatings. Among claims made were resistance to sunlight degradation and the ability to transmit light, desirable in certain applications.

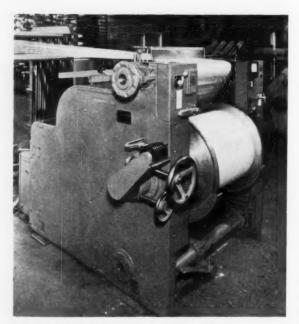


FOR EASIER CLEANING, MAINTENANCE—Saco-Lowell's Tru-Set Arm Assembly for spinning, shown in top portion of picture, is a self-contained unit which replaces a multiplicity of parts necessary on conventional spinning frame. Bottom portion of picture shows the component parts of Tru-Set Top Arm

A new type of apparel insulation, "Temp-Tron", is a washable batting of wool, acetate and Dacron, suitable for garments to be worn by refrigerator workmen, for cold climate exposure and sportswear. At the other extreme, suited for 2500°F. temperatures. "Kamklad" was described as a tightly woven asbestos cloth surfaced by a special process with aluminum foil to reflect 90% of radiant heat. Fire baffles and protective curtains were other proposed uses. For more moderate climatic conditions and in recognition of the growing interest in lighter weight clothing, Pacific Mills offered a 6-ounce Dacron-worsted tropical suiting said to possess exceptionally good wrinkle-resistance. The old adage of people who live in glass houses might some day be changed to people who live in glass coats, if success is achieved by an East German textile firm that exhibited a man's overcoat made of glass fiber fabric. A triple-laminated material suggested for women's rainwear consisted of two layers of vinylite film backed with acetate jersey, the color or pattern being locked in the second layer.

By way of confirmation of previously reported findings of Courtaulds, Ltd. indicating that wear-life equal to or better than that of all-cotton constructions might be obtained in certain garments, the Dutch Enka Co. published the results of use trials on underwear made of two-thirds cotton and one-third rayon staple which showed durability exceeded that of the all-cotton counterpart with no adverse effect on garment dimensional stability.

In England the T.B.L. Co., pioneers in crease-resist finishes, announced that they had been successful in achieving wash-wear finishes for linen as well as for rayon fabrics. Although popular abroad for several years, it was only during the past 12 months that American-made wash-wear broadcloth in men's shirtings made its appearance. With all the good and bad-natured dissertations on what's wrong with the man-made fibers, we may soon see the day when cot-



TRICOT WARPER—Kidde's new tricot warper allows easier doffing by hydraulic means yielding better quality beams

ton will be embraced by the man-made fabrics, according to a report of the Chemstrand Corp.'s development of nylon bale ties for cotton.

The vulnerable sweater market was invaded by another synthetic yarn when Helanca SW stretch yarns, designed especially for those particular knitted garments, appeared on the retail counters. A threat to the popular men's stretch nylon-type half-hose was noted in the announcement that a new one-size sock in a patented two-way rib, eliminating the need for stretch yarns, was to be made available this spring.

Offered for upholstery furniture was a fabric bonded to polyurethane foam. Vinyl-coated fabrics woven of Fiberglas yarns were produced for the shoe industry and "Glasweve" fabrics made by permanent fusing to a plastic backing and sold as a new lampshade material were displayed at the lamp industry materials show in New York.

Revival of the activities in the field of paper as a textile competitive material appeared in news stories of Kimberly-Clark Corp.'s "Fabric K-2000". This was described as being a cross-laid web of nylon, rayon, glass, cotton or other fiber bonded by an adhesive and laminated between two layers of cellulosic "skin" of high wet-strength paper. It was claimed that such a material could be printed or textured by paper-making techniques, with a possible production cost of under 8¢ a yard making it practical for disposable doctors' jackets, nurses' uniforms, safety caps, raincapes, jackets and sport shirts.

### Testing Methods and Equipment

As I remarked at a meeting a few years ago, there seems to be no remedial pill for the ills of pills in spun fabrics, so technicians are still engaged in perfecting a testing instrument that may predict fabric performance in service. British Nylon Spinners' research workers reported on a comprehensive study of the pilling problem, along with details of laboratory apparatus used during their investigation. A few months later the I.C.I. Research and Technical Service Laboratories described a tumbling action tester which they found to give good correlation with actual wear. More recently, Du Pont technicians published a report on a new "Random Tumbling Pilling Tester" in which samples are tumbled inside a rubber-lined cylinder in the presence of a small amount of cotton lint. A high degree of correlation was found between laboratory pilling and the conditions encountered after 300 hours or more of wear for a wide range of

Exhibited at the American Cotton Manufacturers' Institute Meeting in Clemson, S. C., last April were an Automatic Micronaire, said to be capable of doubling the amount of work of the standard model, a yarn-count "Shadowgraph", the multi-purpose Uster Corp. "Hy-Lo" indicator for counting thick-and-thin places in yarn within pre-set limits, a staple diagram apparatus from the same manufacturer capable of reducing the time for evaluating staple diagrams to 10-15 minutes for raw cotton and card slivers, and a high-speed Arealometer which eliminated pre-weighing of sample for measuring fiber fineness.

A German-made "Xenotest" instrument for determining the lightfastness of textile materials featured advantages of duplicating conditions practically equal to sunlight with the shortest possible testing time, using what was described as a "high pressure radi-

ator" as the light source, while in this country the chairman of a special task group of the American Association of Textile Chemists and Colorists stated that the use of sun-hours or ultra-violet hours as a yardstick for testing sunlight fading was "a snare and a delusion". He suggested the use of the Langley heat energy unit in conjunction with the AATCC Blue Standards because of poor reproducibility and correlation between labs of the present Fade-Ometer tests.

Carpet performance studies occupied the attention of a number of investigators. The Textile Research Journal carried a report on the results of a study of the soiling and crushing characteristics of various man-made fibers and blends in Axminster carpets, while from the laboratories of the American Cyanamid Co. came an instrument for the soiling of carpet specimens to aid in evaluating the efficiency of soil-retardant finishes. Good correlation with actual floor tests was claimed.

Wear-testing or the measurement of abrasion resistance continued to present a difficult problem to laboratory workers. A Swiss "scouring machine", utilizing a nylon bristle brush was described as an instrument for testing the wear-resistance of all textiles, including hosiery and other knitwear. In this country further interlaboratory tests were under way to try to obtain more reproducible results with the Accelerotor abrasion tester after modification to eliminate certain variables. To help judge the merits of various warp sizings, a laboratory abrader described by a Georgia Tech student was intended to duplicate the abrasive action on yarns in the loom during weaving.

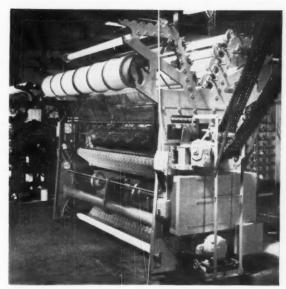
A modification of the AATCC Crockmeter was suggested for yarn testing with reports of consistent results obtained in a short time with less damage to the test yarn. Atlas Powder Co. designed apparatus to generate static electricity charges for testing fabric properties.

In these days of increasing popularity of bacteriostatic reagents for textile products, an interesting report was presented on details of a method for their evaluation which was asserted to have a relatively high degree of precision.

The Textile Research Journal published a description of a simplified cross-sectioning and staining method used by a Japanese rayon company for observing skin and core of rayon, reducing the time required from 20 hours to 5 minutes. A rapid spot test for distinguishing between methylated urea, ethylene urea, melamine and certain combination finishes on fabrics was outlined in the American Dyestuff Reporter.

A California concern introduced a hydraulically operated fabric burst tester with a capacity of up to 600 pounds per square inch. Scott Testers, Inc. offered a new double screw drive super-precision tester with inertialess weighing system for any fiber, yarn or fabric up to 2,000 pounds tensile. An electronic lap tester which utilizes the Uster Varimeter as the measuring head was developed by Thomason Textile Service, Inc. For studying the compression characteristics of both synthetic and natural crimped staple fibers an improved test method was disclosed by research workers of Industrial Rayon Corp. and was utilized in the investigation of how IRC nylon behaves in carpeting.

A fabric may sound like it feels pretty good, according to a report released by the U. S. Department



GOOD FOR LACES—This new ten-bar raschel knitter of Kidde Manufacturing Co., Inc., Bloomfield, N. J., is especially efficient in the manufacture of laces and edge fabrics

of Agriculture. Description was given of a "Rustle-ometer" which analyzes the sound produced by rubbing fabrics together, picking it up and translating it into a pattern to give a direct index of fabric hand. For the testing and measuring of hosiery, a North Carolina concern introduced the "Volumet" measuring machine, operating by means of a telescoping spring-pressured toe mounted on an expandable leg frame.

Foreign developments included the "Vieluba" instrument for measuring thread regularity by a photoelectric technique, a high-speed extensometer with rates of extension of from 10 to 1,000% per second with an overall efficiency of 3 to 4%, and a "Wide Range Super" moisture meter said to operate at a frequency far higher than any other commercial moisture meter. Also reported in the literature was a German-made motor driven twist tester operated at speeds of from 60 to 3,000 turns per minute with instant reversal of direction from "S" to "Z". From Holland came word of a device developed to determine the lateral stretch of stockings based on a principle derived from an American standard as well as a technique for measuring tricot fabrics' stretch on the Scott IP-2 tester.

The foregoing review of the year's textile research achievements is far from complete, but it is an impressive record of technological advances being made on every front. Although the expenditures for research, when calculated as a percentage of dollar sales, is not great, those who say we are lagging behind other industries in accomplishments are ill-advised or misinformed.

Looking ahead, we may anticipate increasing gains by the man-made fibers in all end-uses. Many of the developments in new dyestuffs and chemicals, improved finishes for cottons, more efficient processing and novel fabric constructions have been stimulated by the introduction of fibers and yarns with new characteristics. If they falter and stumble on the way, it is because they are moving forward.

### Max Thal

(Continued from Page 36)

Alamac is also equipped with curing boxes for Permathal finishing; a complete sueding and napping department including heat-setting equipment for synthetics.

Last month Alamac bought and moved to Indian Orchard a fully equipped blending and carding mill to prepare its own Orlon-Dynel rovings to feed into its Wildman pile knitters for the manufacture of its deep pile fur-like fabric which is tradenamed "Furalla."

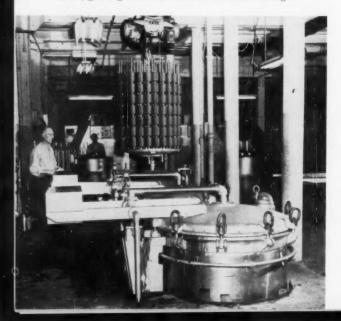
Max Thal, a modest soft-spoken man, is understandably proud of the success of his company. In his quiet way, however, he is emphatically insistent that Alamac's achievement has not been his alone. For a great part of the credit for what Alamac has done, he points to Bernard Fletcher, general sales manager, who also is active as a stylist and as the force behind Alamac's vigorous promotional efforts.

Then there are the other Thals who are key men in Alamac's operations. These are Max's younger brothers and there are four of them, all seasoned knitters and men of outstanding ability in their own right. There is Bill Thal who heads up Alamac's mill operations. There is Jack Thal in charge of knitting. There is Julius in charge of quality control, and Bernard who handles yarn purchases. Other men who have worked closely with Max Thal in making Alamac what it is today are Leo Gruenberg who manages sales in the cotton knits division and Joseph Gaines, the head of the synthetics division.

### Alamac Is Fashion Leader

Alamac's amazing growth and its tremendous reputation has not been accidental, nor has it been brought about by riding the crest of a wave of popularity for knitwear. It is true that the past decade has seen knitwear grow in popularity in womenswear and sportswear. But instead of riding this wave, Alamac has been largely instrumental in *creating* it.

One of the essential steps in moving knitted fabrics upwards in consumer regard has been the stabilizing of cotton knits. In this achievement, Alamac has taken the lead. An important part of this progress was the development of Alamac's Permathal, a resin finish that made cotton knitted garments such as men's sport shirts and women's blouses dimensionally stable, getting rid of the old curse of shrinkage.



Later the Permathal finish was combined with an Everglaze finish for wrinkle resistance and improved hand. As a result of these advances cotton knit garments can be cut and sewn to fit well and to retain their fit through strenuous wear and many launderings.

The Permathal Everglaze finish on Alamac's knitted cottons adds about 20 cents to their prices per pound—a really whopping premium in a trade where all too often the lowest price is the deciding factor in the selection of cloth. Yet Alamac's fabrics easily carry this big added element in price. Max Thal and his associates have had no trouble selling their Permathal finished goods to garment manufacturers eager to get a thoroughly washable, colorfully styled knit fabric for a wide range of men's and women's garments.

### Early Success with Orlon

Another resounding example of Max Thal's method of making and selling premium knit goods was the success of Thalspun, a blended fabric containing 80% Du Pont's Orlon acrylic fiber and 20% wool. Introduced in 1952 when Orlon was still largely an unknown quantity to most people in textiles, the fabric was an immediate and tremendous hit. Astutely confined in its first season to one manufacturer, Debby of California, 125,000 dresses were cut from the cloth, resulting in sales by Alamac of 3/4 million yards within a few months. From that immensely heartening start, the fabric has gone on to new triumphs until now, four years later, it is one of the profitable standbys in Alamac's line. Originally produced in solid colors, it is now available in a variety of richly colored stripes, patterned effects and interesting tex-

Knitted fabrics are closely tied in with sportswear and for sportswear California is the leader in styles. Consequently, Max Thal and his stylists at Alamac keep a sharp eye on what goes on in California stylewise. Thal, over the past ten years, has poured an enormous amount of hard work into selling his fabrics in California and his firm holds a strong position with West Coast garment makers. In 1955, Alamac received not one but seven gold medals for Thalspun jerseys at the California State Fair and Textile Exposition—the first knitter to be so honored. Last year, Alamac returned to the fair to collect eight gold medals for its cotton knits and blended knit goods.

Alamac is first and foremost a style fabric producer. It maintains its success in this field by boldly breaking new ground in creating broad new trends in knitted outerwear fabrics. Alamac, for example, a few years ago, saw that the colorful knitted stripings originated in Italy by designers such as Emilio Pucci had a tremendous potential. The company moved swiftly into production of a broad range of warmly colored striped goods and gave a tremendous impetus to the craze for these stripings that swept the country.

Alamac road the trend hard while the going was good, actually hiring Pucci himself to come to this country and design new and even more "Italian" Italian stripings. But when the trend was past its peak, Alamac, with great courage and daring, pioneered in a reversal of direction—the company took the lead in bringing out the dark, subdued "Ivy League" stripes. Ivy League patterns were also a hit, making old-fashioned the bright Italian designs.

(Continued on Page 81)

HIGH PRESSURE OPERATION—In Alamac's dychouse the company dyes its own yarns

# **Yarn Preparation Tests**

(Continued from page 40)

# Sampling

Test eight spindles per frame side and yarn style.

#### Procedure A:

- Set the feeler gage at 0.001 inches below standard. See whether the gage will fit into the blade opening. If the gage does not fit into this slot easily, the blade is set too close.
- 2. Set the feeler gage at 0.001 inches above standard. See whether the gage will fit into the blade opening. If the gage does fit into this slot easily, the blade is set too wide.

#### Procedure B

With experience, the tester will be able to perform the check more quickly by merely setting the feeler gage at standard, and judging by its fit into the slot as to whether any settings may be off-standard.

#### Evaluation

Record and report any off-standard blade settings, by frame number and spindle number, so that immediate corrective action can be taken.

Maintain a record of percentage of off-standard settings found, by dividing the number of off-standard blade openings by the total number of spindle positions checked.

# TWIST SETTING TEST

#### Purpose

Since poorly set yarn will tend to kink excessively in weaving, it is desirable to perform periodic tests, which will aid in controlling the yarn conditioning process at optimum as regards twist setting.

# Sampling

Yarn is best sampled in the winder room, after it has been exposed to the prevailing atmospheric conditions of temperature and humidity, following the conditioning process.

Usually, four determinations on each of ten yarn packages constitute an adequate test sample.

# Procedure

- Remove an 18-inch length of yarn from the package.
- 2. Hold each end between thumb and forefinger.
- Extend yarn horizontally, being sure not to insert stretch.
- Bring ends together, the two hands traversing in a uniform arc upward.
- Count the number of turns formed by the yarn twisting about itself.

#### Evaluation

The conditioning process is considered off-standard when the average number of turns formed in Step 5 above exceeds the allowable tolerance.

Standards and tolerances are usually developed by experimenting with different types of conditioning operations, such as conditioning time, or mixtures of solution where applicable.

Where the twist-setting test is off-standard, and nothing can be found wrong with the conditioning process, a review of actual twists in the yarn may be called for. Changes in twist, within the limits allow-

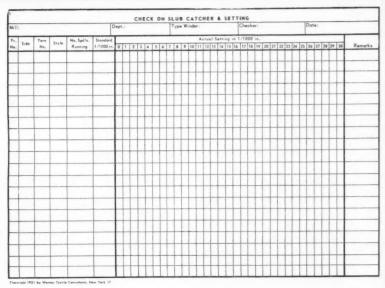


Fig. 23

able by specifications, are sometimes necessitated to allow for variations in fiber properties.

Performance of the twist-setting test will alert mill supervision and management to off-standard conditions, which may call either for an adjustment of the conditioning process or else for a further check into prior processing and fiber properties.

# PLY TWIST DETERMINATION

#### Purpos

To assure conformance with yarn and cloth specifications.

New	ner lext.Cons.			TWISTER PACE				
Vind	er:	R	oom:		Date:		By:	
Wind	Winder Drum R.P.M.		Winder	r Drum Diem.		Winder Dr	rum Slippage	
Wind	er Drum Yards per R.P.H. X		in.	D1 mm . x 3,14	x (100 -	5	Slippage)	
	Number Diameter							
No.								
1	Stop Start Time (Mime.)							
2	Stop Start Time (Mins.)							
3	Stop Start Time (Nine.)							
à	Stop Start Time (Mine.)							
5	Stop Start Time (Mins.)							
6	Stop Start Time (Mins.)							
7	Stop Start Time (Mins.)							
8	Stop Start Time (Mins.)							
9	Stop Start Time (Wine.)							
10	Stop Start Time (Mins.)							
Aver	age Time(Hins.)							
(Tim	e/Bobbin e × Yd./Min.) nal lbs. per in *							
Stan								

Fig. 24

#### Equipment

Twist counter, pick needle.

#### Procedure A:

- Unwind a length of yarn to be tested by turning the bobbin, making sure not to pull off the yarn, which might change the twist.
- 2. Insert the yarn in the two jaws of the tester, set ten inches apart, under suitable tension. (ASTM prescribes tensions of 156 grams/Yarn No. for cotton and 131 grams/Yarn No. for rayon and acetate. For yarns on which no official standards are prescribed, temporary standards should be set from mill experience).
- Remove twist, by turning rotable jaw in opposite direction of twist. Yarns are completely untwisted when a pick needle can pass freely between them, from one jaw to the other.
- Read the counter, showing the revolutions used to untwist the yarn. Since the twist tester jaws were set ten inches apart, the number of jaw revolutions divided by ten yields turns-perinch.

#### Procedure B:

This procedure makes use of the fact that the twist in plied yarns is governed by the speeds of the front roll and cylinder of the twister frame. This test is usually considered more accurate than Procedure B, and is also many times faster. However, it can be used only in those mills where an effective maintenance program is used in keeping slippage of spindle tapes at a minimum.

- For a period of one to two weeks, select ten bobbins a day for test under Procedure A above. At the same time, ascertain the front roll and cylinder speeds under which these bobbins were produced. Based on such fifty to one hundred bobbins exhibiting the desired twists for the particular yarn style, determine the corresponding average front roll and cylinder speeds for the frame.
- In all future tests, simply determine the front roll and cylinder speeds. As long as these remain on standard, within ±3% based on Step 1 above, the twists will also be on standard.
- Repeat Step 1 whenever a change in gearing takes place, affecting front roll and cylinder

speeds. Also, as a matter of routine re-check, repeat Step 1 once or twice a year.

#### Evaluation

Any off-standard conditions found should be reported for corrective action.

#### QUILLING FRAME CHECK

#### Purpose

Proper building of the filling bobbin or quill requires close control, so as to keep filling stops in weaving and resultant cloth seconds at a minimum, and assure high weaving efficiency. Proper build becomes especially important when weaving filament or fine count synthetic staple yarns.

#### Equipment

Steel rule, mechanical or electronic tension tester. Sampling

As a rule, check every spindle position on the frame, except for bunch length. Bunch length may be limited to every fifth or tenth spindle, provided a system of rotation is used which assures, after five or ten inspections, that every spindle has been checked.

## Procedure

Inspection and testing involves four major categories:

- 1. Frame condition
  - Observe and note any loose waste, cut guides or cut posts.
- 2. Package measurements
  - Check for conformance to standards and tolerances as regards diameter, length of stroke and traverse, wraps per stroke and general build.
- 3. Bunch length
  - Permit the spindle to build a full bunch on the bare quill, and then measure the length.
- 4. Tensions
  - Inspect all tensions for accumulation of excess waste or dirt. Check that proper tensioning devices and settings are in use. Determine actual tension with mechanical or electronic tension meter.

#### Evaluation

Any faulty conditions or test results should be reported to departmental supervision, so that immediate corrective action can be taken where required.

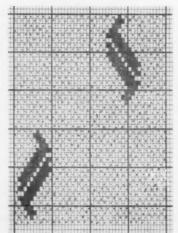
# Spot Designs (Continued from page 56)

Not all slanted figures are suitable for a four-way variation. For instance Fig. 111a is an example of a spot which can only be used in two directions. The

reason for this is that both ends are built up alike. Actually, the second motif was not rotated 90° as was done in Fig. 110, but rather it was inverted or drawn backwards which gave the opposite direction effect.

To make this condition more evident we are illustrating the cloth sample from which this design was taken in Fig. 111b.

TO BE CONTINUED



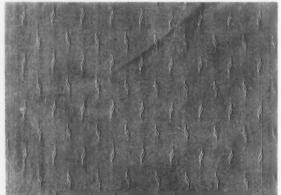


Fig. 111A—This motif can be turned in two directions only.

Fig. 111B—Cloth sample of the design in Fig. 111A.

# For the DYER and FINISHER

# **New Levelling Agent**

Sandoz Chemical Works, Inc., has developed a new levelling agent, Lyogen DK, for direct and vat dyestuffs. Sandoz claims use of Lyogen DK makes it possible for a dyer to obtain a desired shade and properties without being restricted in choice of dyestuffs by differences in their strike.

# **Eastman Polyester Dyes**

A new line of polyester dyes, including several new prototypes, has been introduced by Eastman Chemical Products, Inc. The new line is based on Eastman chemists; intensive research program of dyes specifically suited for polyester fibers. Procedures recommended by the company for handling the new dyes are those already in general use.

# **New Finishing Chemicals**

Proctor Chemical Co., Inc., Salisbury, N. C., has announced two new products. Protolube, PE, an emulsified polyethylene, when used in conjunction with thermosetting finishes, is said to import a durable plasticization to the resins. This quality reduces needle cutting, improves crease and abrasive resistance and tear strength.

The company also has added a new line of anionic softeners, Melotone AM, K and Melotone Liquid. These are said to have exceptional resistance to yellowing when exposed to high processing temperatures.

# **Oil-Repellent Treatment**

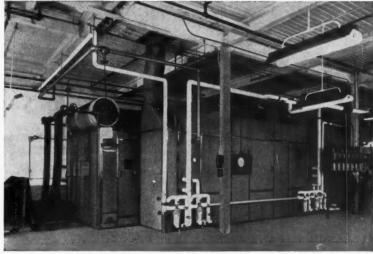
A textile treatment that for the first time will make fabrics resist oil-borne stains has been announced by Minnesota Mining and Manufacturing Co. The treatment, which will also resist water-borne and combination stains, can be applied to men's wear and top-coating fabrics, including wool, worsted and worsted-synthetic blends, as well as upholstering fabrics.

# **New Softener**

Lauramine RT, an anionic softener for finishing cotton fabrics and yarns, as well as rayon, wool and certain synthetics and blends, has been introduced by Laurel Soap Manufacturing Co., Inc. It is a soft, fluid paste, dispersible in warm or tepid water, resistant to high temperature and aging effects, and will not change the shade of dyed fabrics or yellow whites. Free samples are available.

For further information write the editors.





Installation view of Proctor Loop Curer

- **★** Greatest Curing Uniformity
- \* Improved Design
- \* Maximum Capacity with Minimum Power Requirements
- \* Flexibility of Operation
- \* Simplified Installation



# LOOP CURER and ROLLER CURER

These rugged, high-capacity machines feature the latest design and construction improvements—all geared to increase your profits. Units can be combined with existing equipment to meet your exact requirements. For fabrics that will not handle properly in loop, the roller curer is recommended. Recent developments for this machine also include improved air distribution, flexibility in holding capacity, and no-stretch operation. These machines are the result of long experience in supplying machinery to the textile industry. For the complete story of the profit-making opportunities offered by Proctor, write today for latest information bulletins.

#### WRITE FOR DETAILS. PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • NOT AIR SLASHER DRYERS • CLOTH CARRONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR PRODUCING TUBLIAR KNITS • EQUIPMENT FOR • \$\footnote{C}\text{EDMAIZE}\text{D}\text{\*\*}\text{CDMAIZE}\text{\*\*}\text{\*\*}\text{SHRINK-TO-FIT FABRICS • CARPET DRYERS



# PROCTOR & SCHWARTZ, INC.

Philadelphia 20, Pa.

Manufacturers of Textile Machinery & Industrial Drying Equipment

# U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in November, 1956. All prices are given as subject to change without notice.

# RAYON FILAMENT YARN

# American Bemberg

**Current Prices** 

# Regular Production Reel Spun Yarn

Den/Fil	No Twist Skeins	Twisted* Skeins & Cones	8½ Turns	High Tw 12 Turns	rist Skeins 15 Turns	& Cones 18 Turns
40/30	\$1.49	\$1.95				\$2.08
	7.04		4444	****	****	1.72
50/36	1.24	1.50	****		****	
65/45	1.14	1.30		\$1.53	****	1.58
75/60**	1.04	1.18	****	1.41	\$1.46	1.49
100/74**	.95	1.08	****	1.33	1.38	1.44
125/60	.94	1.05	\$1.09	1.30		
150/120	.93	1.02	1.12	1.27		X 2 2 2
300/225	****	.95			1.08	

\* Twist includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.
\* Spun Dyed Cupracolor Black 15¢ per lb. extra.

# "44" HH Spool Spun Yarn

	No Twist	No Twist	Turn	Turn	12 Turn	12 Turn	Turn
Den/Fil	Tubes	Beams	Beams	Cones	Beams	Cones	Cones
40/30	\$1.35	\$1.35					dess
50/36	1.00	1.00					2001
65/45	1.05		****	****		\$1.42	
75/45°	.97		\$1.08	\$1.08	\$1.31	1.31	\$1.39
100/60*	.89		1.03	1.03	1.23	1.23	1.31
125/60	.84	****	.99	.99			****
150/90°	.77	****	.81	.81		1.15	1.24
150/120	.81	****		.93			****

\* Available also in Spun Dyed Cupracolor Black at 15¢ per lb. extra.

# Nub-Lite (Short Nubbi)

Code	Den/Fil	2½ Twist Skeins	2½ Twist Cones*	5 Twist Skeins	5 Twist Cones*
1516	150/90		****	\$1.45	\$1.35
1517**	150/90	****	****	1.45	1.35
2000	200/120		****	1.06	.96
2025***	200/120			1.06	.96
3000	300/180	\$1.10	\$1.00	2100	
4000	400/224	1.10	1.00		
6000	600/360	1.08	.98		****
8000	860/450	1.08	98		

\* Basic price for cones when dyed. Dyed Colors 30 and 35 cents above basic price. Prices based on 200 lb. dyed lots only. Prices for natural yarn on cones same as skein prices.

\*\* Code 1517 can be run in warp or filling.

\*\*\* Code 2025—Softer than 2000.

# CUPIONI Type B

Code 9600	Den/Fil 50/30	No Twist Skeins \$1.39	2½ Twist Cones	5 Twist Cones \$2.14
9640	70/45	1.29	\$1.64	
9656	100/60		1.48	****
1540	150/90	****	1.25	
9710	200/120		1.20	****
9734	275/135	****	1.10	
9790	450/225		1.10	****
9813	600/372		1.07	

Spun Dyed Cupracolor Black 35¢ per lb. extra. This applies to all deniers.

# Long Type A

Code	Den/Fil	2½ Twist Cones	5 Twist Cones
9686	150/135	\$1.20	\$1.25
9738	275/135	1.05	1.10
9780	450/372	1.05	1.10
9815	600/372	1.02	1.07
9826	900/372	.95	1.00
9876	1250/372	.95	1.00
9925	2500/744	.95	1.00

# Modified Type C

	modified Type C	
Code	Den/Fil	5 Twist Cones
9662	100/60	\$1.43
9688	150/120	1 25

Terms: Net 30 days, F. O. B. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F. O. B. delivery point.

# American Enka Corp.

**Current Prices** 

Effective December 4, 1956

Standard Quality Yarns

# Standard Quality Rayon Yarns

A. Natural					91	eins		
=			be		SE	ems		M
Den./Fil.	Luster	Turns	Weaving	Beams	Long	Short	Cakes	Knitting
50/18	E	5 S						1.56
75/10	В	5 S 3 S&Z					1.08	
75/18	E	4 S						1.22
75/30	B	2.5,4S&Z	1.17	1.17			1.08	1.17
75/30	В	8 S	1.22			1.37		1.22
75/45	P.E	2.5,						
		4,5S&Z	1.17	1.17	1.23	1.37	1.08	1.17
75/60	B,P	3,4 Z	1.22				1.10	1.22
100/14	B,P	3 S&Z				1.12	.96	1 07
100/40	B,E	12 S					00	1.27
100/40	B,P,E	4,5 S&Z					.96	1.04
100/40	B	6 S	1.10	1.04	1.00	1.10	.96	1.04
100/40,60	B,P	2.5,4S&Z	1.04	1.04	1.08	1.12	.98	1.04
100/60	E	2.5 S 3 Z	1.00	1.06			.80	.96
125/40	E	3 Z 2.1,3S&Z	.91	.91	.94	.99	.86	.90
150/40	B,P,E B,E	5 S&Z	.91	.91	.94	.99	.86	.90
150/40 150/40	B.E	8 S&Z	.97		1.00	1.05	.00	
150/40	B.P	10 S&Z	1.03	1.03	2.00	2.00		
150/90	B.E	2.1 S&Z	.92	.92			.87	
200/40	P	3 Z	.00					.82
200/40	B.P	8 S				.95		
250/60	P.E	8 S 2.4 Z						.75
300/50	B.E	3 S	.73	.73				
300/60,120	B.P.E	2.1 S&Z	.73	.73		.76	.71	.73
300/60	В	3.5 S	.73	.73		.76	.71	
300/60	B	4.3 S 7 S	.76	.76			.74	
300/60	B		.83					
300/40,120 H.T.	B	2.5,						
	-	3,48	.75	.75				
450/80	B	3 S	.70	.70		.72	.68	
600/80,120	B,E	3 S 3.4 S	.69	.69			.67	
900/120	В	3.4 S	.68				.66	
900/120 H.T.	В	3.6 S	.70				.68	

# "Jetspun" Colored Yarns

		,	Weaving			
Den./Fil.	Tenacity	Turns	Cones	Beams*	Cakes	Colors
100/40	Regular	2.58	1.39	1.39		A11
150/40	Regular	2.18	1.26	1.26		All
200/40	Regular	8.38	1.27			All
450/80	Regular	3.08	1.05			All
300/40	High	3.4S	1.10	1.10		All
600/80	High	3.4S	1.06			All
900/120	High	3.45	1.05	1.05		All

rov.izv nign 3.4S 1.05 1.05 All Registered trade mark of American Enka solution dyed rayon yarn. \* Single color.

# American Viscose Corp.

Effective December 14, 1956

Grad	4 - 4	V -	

		Graded Yo	irns			
Den-			Short	Long	Cones Beams	
ier	Filament	Туре	Skeins	Skeins	Tubes	Cakes
50	20	Bright & Dull	3	\$1.59	\$1.56	\$1.45
60	10	Bright			1.41	1.30
75	10-30	Bright	1.24	1.20	1.17	1.08
75	30	Dull		****	1.17	1.08
100	14-40	Bright	1.12	1.07	1.04	.96
100	60	Dull	****		1.06	.98
150	24-40-60	Bright & Semi-Dull	.99	.94	.91	.86
150	40	Dull	****		.91	.86
150	90	Dull	****	****	.92	.87
200	10-44	Bright	.90	.85	.82	.78
250	60	Semi-Dull & Dull	.82	.78	.75	.73
300	44	Bright & Dull	.79	.76	.73	.71
300	234	Dull	****		.75	.73
450	100	Bright	****	.72	.70	.68
600	100	Bright	****	.71	.69	.67
900	60-100-150	Bright	****	.70	.68	.66
1200	75	Bright	****	.67	.65	****
2700	150	Bright	4+++	.70	.68	****
		Extra Turns P	er Inc	h		
75	30	Bright 6-Turns	\$1.36	\$1.32	\$1.29	8
100	40	Bright 6-Turns	1.24	1.19	1.16	1.08
150	40	Bright 6-Turns	1.09	1.04	1.01	.96
300	15	Bright 5-Turns	****	****	.78	****
300	44	Bright 6-Turns	****	.86	.83	.81
600	30	Bright 5-Turns	****	.76	.74	.72
		Rayflex Yo	irns			
150	60	Rayflex	S	\$	\$ .94	\$ .89
300	120	Rayflex			.75	.73
450	120	Rayflex	****	****	.72	.70
600	234	Rayflex	****		.71	.69
900	350	Rayflex	****	.72	.70	.68
		-				

# **New Celanese Assignments**

A number of executive changes were announced recently by Celanese Corp. of America. Kenneth C. Loughlin was named executive vice president, a newly created position in which he will have broad administrative responsibilities. He had been vice president and general manager of Celanese's textile division. Ronald O. Gilbert has been appointed vice president. He will continue to serve as secretary of the corporation, a post he has held since 1945. John W. Brooks has been named vice president and general manager of the company's textile division. He had been serving as director of textile marketing.

Alexander R. Cochran has been appointed vice president with responsibility for coordinating the company's manufacturing facilities and engineering policies. Previously, he had been manager of plant operations of the company's chemical division. George H. Richards has been appointed a senior vice president. He had been serving as financial vice president. He is a director and member of the executive committee.

Peter H. Conze has been made director of textile marketing succeeding Mr. Brooks. Mr. Conze joined Celanese in June, 1956, coming from Midland Tex-

George C. Hein has been appointed textile district







sales manager in New York. In addition to his new duties, he will continue to serve as merchandising manager of knitted fabrics promotion.

# **New Eastman Appointments**

In connection with the setting up of the newly formed Textile Merchandising Department by Eastman Chemcial Products, Inc., under the direction of Amos H. Griffin, the following new assignments were announced recently: William J. Nimmons, assistant to Mr. Griffin; Bruce F. Roberts, manager, apparel merchandising; Joseph E. Carvin, manager, home furnishings merchandising; Frank Ruddock, manager new products merchandising; Arthur B. Thruman, manager, retail promotions, with Lester H. Senholzi as staff assistant.



# **Expand Cellulose Research**

Dr. Hans Kraessig has been appointed head of Industrial Cellulose Research Ltd.'s new department extending the firm's activities in the field of basic cellulose research. Industrial Cellulose is a subsidiary of Canadian Interna-tional Paper Co. In the past its research has been confined mainly to finding new applications for dissolving pulp. It is anticipated that the new activities, besides developing improved celluose materials, will find more efficient methods of utilizing forest resources. Dr. Kraessig was an associate at the University of Freiburg, Germany, of Prof. Herman Staudinger, winner of the Nobel Prize in 1953 for basic research in synthetics.

# Fabric Styling Service

Courtaulds (Alabama) Inc. has introduced a fabric styling service to demonstrate new patterns and color concepts for its solution-dved rayon staple, Coloray. The styling, done on hand looms, is said to have resulted in many new fabric ideas. Courtaulds reports that colorfast properties for many of its Coloray dyes exceed the American Association of Textile Chemists and Colorists' highest standards.

# **New Ounegan Management**

New owners of Ounegan Woolen Mills, Inc., have taken title to the property in Old Town, Me., from Textron, Inc. Murray Rosen, president of Empire Sportswear, is chairman of the board, and Jack E. Mintz, of Jaxton Clothes, is president of the new corporation. The mill, in operation for the past 46 years, will continue making woolen fabrics. All key personnel at the mill have been retained.

# Chain of Trilok Distributors Set Up

A nationwide chain of 23 textile distributors has been set up for Trilok, new three-dimensional upholstery fabric produced by United States Rubber Co.'s textile division.

(Continued on Page 87)

# NOW A "COMPLETE PACKAGE"



THE MODERN WAY TO BUY THROWN, NATURAL OR DYED FILAMENT YARNS

RAYON • NYLON • DACRON • ORLON

Modern standards of production efficiency and quality demand modern methods. The "complete package"— a perfectly thrown, natural or dyed package of filament yarn—prepared to your custom requirements by experts may be the ideal solution to your yarn problems.

As specialists in the exacting job of dyeing and throwing modern yarns since 1922, Hoff-ner is the logical choice for "complete package" service.

Why not consult us about this new way of streamlining your production and improving quality?

# EL COMPANY For that added touch of beauty

DYERS and THROWSTERS of MODERN YARNS

General Offices at Belgrade & Ontario Streets, Philadelphia 34, Pennsylvania Plants at Philadelphia and Quakertown, Pennsylvania

SALES

David F. Swain & Company, 105 W. Adams Street, Chicago 3, Ill. REPRESENTATIVES Shannonhouse & Wetzell, Johnston Building, Charlotte 2, N. C.

		I hick and	Thin Ya	rns			
150	40-90	Bright & Dull	8	8	\$1.15	8	
200	75	Bright & Dull			1.05		
300	120	Bright & Dull			.95	****	
450	100	Bright & Dull			.92	****	
490	120	Bright & Dull			.95	4000	
900	350	Dull			1.00	****	
920	120	Bright & Dull			1.00	***	

Colorspun Yarns

Currently producing regular and high tenacity at premiums at \$.35

Viscose	Fil	0	ment	Y	arns

following material deposit charges are requi	red:
Metal Section Beams	
Wooden Section Beams	55.00 each
Wooden Section Beam Crates	30.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools-14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks-14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Speed Crates	20 00 each

wooden Tricot Spool Crates 20.00 each Cloth Cake Covers .05 each Same to be credited upon return in good condition—freight collect. Terms: Net 30 days.

# Celanese Corp. of America

**Current Prices** 

The f

Effective December 14, 1956

Den. Fil. Twist	Beams	Cones	Cakes	Shrunk Tubes
#49 and #14 Production		01.11	01 00	
75/30/3 Bright		\$1.11	\$1.03	
100/40/22	\$.96	777		*****
100/40/3	.98	.96	.91	
100/40/5		1.02	.97	
100/00/3	****	.97	.92	
125/40/22	.94	.92		****
100/40/3	.89	.85	.80	
150/40/2Z "	.87	-	1,000	
150/40/5 "		.91	.86	
150/40/8 "		.97	.92	
150/40/0 "NS		.71		
300/50/3 "	.72	.71	.69	
300/50/0 "NS		.63		
#20 Production				
150/40/3 Bright	.87	.83	.78	
150/40/0 "NS		.71		
150/40/2Z "	.87		179.5	
300/50/3 "	.72	.71	.69	
300/50/0 " NS		.63		
#20 Production			0.0	
100/40/3 Dull		.96	.91	
100/60/2Z "	1.00			
100/60/0 "		.93		
100/60/5 "	1.04	1.02	.97	
150/40/3 "	.87	.83	.78	\$.77
150/40/0 "NS		.71		****
150/90/3 "		.90	.85	
250/60/0 "NS		.67		43.00
250/60/3 "		.75		.70
#52 Thick & Thin Rayon				
150/60/3 Bright		1.15		
450/120/3 "		.89		

450/120/3
Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

# E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** 

Effective with orders December 7, 1956

# Bright and Dull

				(A)		
		Turns/		Cones,		
		Inch		Beams,		
Den.	Fil.	Up to		Tubes	Skeins	Cakes
40	20	3	Textile "Cordura"*	\$1.90	\$1.90	\$1.85
50	20	3		1.63	1.63	
50	20	3	Textile "Cordura"	1.65	1.65	1.60
50	35	3	Textile "Cordura"	1.70	1.70	1.65
75	10	3		1.17	1.20	1.08
75	15	3		1.17	1.20	1.08
75	30	3		1.17	1.20	1.08
100	15	3		1.04	1.07	.96
100	40	3		1.04	1.07	.96
100	60	3	Bright	1.04	1.07	.96
100	60	3	Dull	1.06	1.09	.98
125	50	3		.96	.98	.90
150	40	3		.91	.92	.86
150	60	3		.91		
150	60	3	Textile "Cordura"	.92	.93	.87
150	90	3	Dull	.92	.93	.87
150	100	3	Dull	.92	.93	.87
200	35	. 3		.82	.84	.78
300	20	3		.73	.76	.71
300	50	3.5		.73	.76	.71
300	120	3	Textile "Cordura"	.74	.77	.72
450	72	3		.70	.72	.68
600	96	3		.69	.70	.67
600	240	3	Textile "Cordura"	.70	.72	.68
900	50	3		.68	.71	.66
900	144	3 3 3		.68	.70	.66
1165	480	3	Textile "Cordura"	.68	.68	.65
1800	100	3		.68		
2700	150	3		.68	.70	
5400	300	3		.75		

			Thick	and	Th	in					
100	40	3	#7				1.38	3		1	1.38
150	90	3	#7				1.15	5 1	.16	1	1.15
150	90		#19				1.15	5 1	.16	1	1.15
200	80	3	#7				1.08	5 1	.06	1	1.05
200	90	3	#19				1.05	5 1	.06	1	.05
450	100	3	#7				.89	)	.90		.89
1100	240	3 3 3 3 3	#50				1.32	1		1	.32
2200	480	3	#50				1.14	1		1	.14
			F	iber	E						
300	50	21/2					.88	3			
900	50	2 1/2					.83	3			
900	90	2 1/2					.83	3			
2700	150	21/2					.88	3			
2700	270	2 1/2					.88	3			
5400	540	21/2					.88	3			
		additional	for cones	less t	han	3#	and	tubes	less	than	2#

(A) 28/1b. additional for cones less than 3# and tubes less than 2#. Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

"CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Indi	ıst	rio	Rayon	Corp.	Effective	Dece	ember	21, 1	956
Denier		Filament	Turns per In.	Type	2.8 Lb Cones	4.4 Lb Cones	Beams	2.2 Lb Tubes	4.4 Lb Tubes
100		40	2.5 "S"	Bright	1.04		1.04		
150		40	2.5 "S"	Bright	.91		.91		
150		40	2.5 "S"	Luster #4	.91		.91		
150		40	2.5 "S"	Bright inter- mediate stren	.92				
200	9	20	2.5 "S"	Bright	.82				
200		40	2.5 "S"	Bright	.82				
300		44	2.5 "S"	Bright	.73		.73		
300		80	2.5 "S"	Bright	.73		.73		
300		80	2.5 "S"	Luster #4	.73		.73		
300		80	2.5 "S"	Bright extra strong	.75		.75		
450	- 1	80	2.0 "S"	Bright		.70	.70		
600		90	1.5 "S"	Bright		.69	.69	.69	.69
900		50	2.0 "S"	Bright		.68	.68	.68	.68
900	1!	50	1.5 "S"	Bright		.68	.68	.68	.68

900 150 1.5. "S" Bright .68 .68 .68 .68 .68

Luster #4 is semi-dull.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

# North American Rayon Corp.

Current Prices	•			Cones		
First Quality Yarns	Den/Fil	Twist	Knitting*	No Twist Knitting Cones	Beams, Tubes** and Weaving Cor	Untreated
	75/30	3.5			\$1.17	\$1.08
	75/30 75/30	15			1.30	
Semi-High	75/30	20			1.40	
Strength Yarns	100/40/60 Brt.	3.5			1.04	.96
NARCO	100/40/60	12			1.22	
	125/52/60	3			.96	.90
	125/52	10			1.13	
	150/42/60/75	3	\$.90		.91	.86
	150/42	3 0 3 0 6 3		\$.71		
	300/75	3	.73		.73	
	300/75	0		.63		
	300/75	6			.83	
	600/98		.69		.69	
	900/46	2.5	.68		.68	
	1800/92	2.5	.68		.68	
Normal	300/75 Brt.	6			\$.84	
Strength Yarns	300/75	3			.74	

HI-NARCO

\* Oiled Cones \$.01 Per Pound extra for Graded Yarns only.

\*1 lb. tubes \$.02 Per Pound extra for Graded Yarns only.

Terms: Net 30 days, F.O.B. shipping point, minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight to Memphis, Tennessee allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is soid F.O.B. delivery point.

Prices subject to change without notice.

# RAYON HIGH TENACITY YARN and FABRIC

American Viscose Corp.

Effective November 1, 1956 Revised November 14, 1956

	Su	per Rayfle	×	
Denier	Filament	Twist	Beams	Cones
1100	490	0	\$.63	\$.63
1100	490	4.1Z	.63	
1650	980	0	.58	.58
1650	980	4.1Z	.58	
2200	980	0	.57	.57

# The Laurel Leaf

MAGAZINE EDITION



Here's a positive way to improve the lubrication and running properties of your yarns and threads. And you can do it as quick as you can say Laurel SYNCOLUBE A! This Laurel product is a light yellowwhite synthetic oil which may be used as received or as an ingredient in a hot melt wax formulation. It is nonionic in nature and is therefore compatible with other oil-type coning lubricants. It is not a mineral oil. Laurel SYNCOLUBE A is designed for use as a neat oil and is not water soluble, but, being completely saponifiable, it is readily removed from the yarns in a regular scour and will permit easy dyeing. What's more, it is extremely stable to ageing, color change and odor formation during storage. And, it also imparts antistatic properties to synthetic fibers. Send for a free trial quantity of Laurel SYNCOLUBE A and prove to yourself how you can achieve improved processing.

If you are dyeing any Arnal-Dacron blends, we suggest you take a good look at LAUREZOL HT for use as an accelerator. LAUREZOL HT will give good unions and is readily removed from the goods after dyeing with a good soaping off and rinse. We recommend about 20% on the weight of the fabric for satisfactory results.

Our regular magazine issue of The LAUREL LEAF is published on a bimonthly basis. It contains interesting facts and helpful data on a variety of textile field subjects. This fact-filled, quick-reading house magazine might provide you with the answer to a tough problem you are facing. The LAUREL LEAF is free. We'll be glad to send you and any other of your plant personnel copies. without obligation. Just drop us a note and we'll put you on the mailing list.



LOUIS EL SOAP MANUFACTURING CO., INC.

TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses: Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C.



M & W Tenterette: 30", 80" or 100" long, using our No. 12 tenter clip. We build to any maximum width, with either straight or hinged rails. Serves many uses.

These short tenters are made only by M & W - one of our specialties, developed to answer special needs in many foremost finishing plants.

We can promptly supply full data - advise you how M & W Tenterettes, and other devices like our Constant Tension Batchers, can fill long. felt needs in your plant that no other machinery satisfies. Write today for information on -



√ Tenterettes

V Constant Tension Batchers

Ask For Details Without Obligation

MARSHALL and WILLIAMS CORPORATION PROVIDENCE, R. I. . GREENVILLE, S. C. . NEW YORK, N. Y.

		Tire Yarn		
1100 1650	490 980	2.5Z	.59 .55	.55
1650 2200	980 980	3.2Z-3.6Z	.55 .55	.55
	H	ligh Strength		
1150 1230 1650	490 490 980	2.5Z 3.6Z 3.5Z	.59 .59 .55	.59 .59 .55
1875	980	3.6Z	.55	.55

Super Rayflex, Tire Yarn and High Strength yarns are sold "Not Guaranteed for Dyeing."

#### Tire Fabric

	00/490/2 00/980/2	Tire Yarn \$.69 .635			r Rayflex \$.73 .655	
Ply. 5%	prices based on maximum Break 50/980/2		Carcass,	15%	maximum	Top
· Pro	duction Factor					
525	Open	Carcass		\$.635		\$.665
300	490	Top Ply		.645		.675
115	275**	Breaker		.67		.70

\* Determined by dividing total ends by picks.

\* Orders limited to 5% of total 1650 Fabric booked for any given

period.
The following deposit charges are made on invoices:
\$55.00 each 75.00 each 3.50 each

-freight collect

# Celanese Corporation of America

Effective December 27, 1955

Supersedes September 12, 1955

	Fortise	an Yarr	Prices	
Denier	Packa	ges	Natural	Black
30/2.5/40	2 lb. Co	ones	\$3.00 lb.	\$3.35 lb.
60/2.5/80	4 "	17	2.40 "	2.75 "
90/2.5/120		99	2.25 "	2.60 "
120/2.5/160	4 "	90	2.05 "	2.40 "
150/2.5/180	4 "	90	1.95 **	2.30 "
270/2.5/360	4 "	99	1.85 "	2.20 "
300/2.5/360	4 "	11	1.85 "	2.20 "
60/2.5/80 Olive G	reen-Spun	Dved-OC		es 3.50 lb.

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U. S. A. east of the Mississippi River.

Prices subject to change without notice.

All previous prices withdrawn. Note: Prices on unlisted items can be obtained upon request.

# Fortisan-36 Rayon Yarn Bright

Denier and Filament	Twist	4# cones	8# cones	Tubes	Beams
270/280	0.8Z	\$2.30			
300/280 400/400	0.8Z 0.8Z	\$2.05 \$1.75			\$1.70
400/400	0	*****		\$1.75	
800/800 800/800	0.8Z	\$1.25	\$1.25	\$1.25	\$1.20
1600/1600	0.82	\$1.15	\$1.15	91.20	81.10
1600/1600	0			\$1.15	

Terms: Net 30 days. Shipments prepaid to any destination in U. S. A. East of the Mississippi River. Shipments West of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing. Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

# E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Effective with shipments October 29, 1956

# "Super Cordura"\*

(all packages)						
1100	480	2	\$.63			
1250	480	2	.63			
1650	720	2	.58			
1900	720	2	.58			
2200	960	2	.57			
2450	000		101			

Beams containing ends of direct dyed yarn \$3.30 per end extra.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the contental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of ext of purchaser's choice east of Mississippi River.

""CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

# Industrial Rayon Corp.

Effective November 1, 1956

Unbleached Bright High Tenacity Yarns

SINGL	E END	BEAMS AND				
Den.	Fil.	Turns Per In.	4.4 Lb. Cones	Beams	2.2 Lb. Tubes	4.4 Lb. Tubes
1100	480	1.5 "Z"	.59	.59	.59	.59
1650	720	1.5 "Z"	.55		.55	.55
2200	1000	1.5 "Z"	.54	.54	.54	.54
3300	1440	1.5 "Z"	.54	.54	.54	.54
4400	2000	1 5 "7"	54	54	.54	.54

"Above Prices apply to Type 100. Type 200 Tyron Prices are 3¢

more."

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi

Prices are subject to change without notice.

# North American Rayon Corp.

High-Strength Yarns-SUPER-N	ARCO		
	Twist	Cones	Beams
1650 720	3Z		3.55
1850 720	3Z	\$.55	
Super High Strength Yarns-			
1650 790	1 67	5.9	5.8

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b delivery point.

# ACETATE FILAMENT YARN

# American Viscose Corp.

**Current Prices** 

Effective December 21, 1956

#### Bright and Dull Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
55/14	\$1.04	\$1.02	\$1.05	8.98	\$.99
75/20	1.00	.98	1.01	.94	.95
100/28	.95	.93	.96	.89	.90
120/32	.86	.84	.87	.80	.81
150/41	.77	.76	.78	.72	.73
200/54	.73	.72	.74	.69	.70
300/80	.69	.68	.70	.65	.66
	d Twist 2¢ a net 30 days.	dditional.			

# Celanese Corp. of America

Current Prices

Effective December 20, 1956

# Bright and Dull

	Interme	ediate T	wist		Spinnit	g Twist	
Denier and	4 & 6-Lb		4 & 6-TM	4- Pound			0 Twis
Filaments	Cones	Beams	Tubes	Cheeses	Cones	Beams	Tubes
45/13	\$1.17	\$1.18	8	\$	8	\$1.12	\$
55/15	1.04	1.05			.98	.99	.925
75/20	1.00	1.01	.98		.94	.95	.84
75/50	1.02	1.03	1.00			****	.89
100/26-40	.95	.96	.93		.89	.90	.81
120/40	.86	.87	.85		.80	.81	
150/40	.77	.78	.77	.77	.72	.73	.69
200/52	.73	.74	.73	****	.69	.70	
300/80	.69	.70	.69	****	.65	.66	.63
450/120	.67	.68	.67		.63	.64	
600/160	.65	.66	.65				
900/80-240	.63	.64	.63	****		****	.61
150 Denier 1		es		.76			
55/0/15 Dull	Tricot Be	ams		.985			
2-Pound Che				01 Less	Chan 4-	Pound C	Cheeses
2-BU and 4-				Same Pr	ice as 4	and 6-I	b. Cone
2-Lb. Twist	Tubes			.01 Less			
Z-LID. I WISE	1 uncs				n 120		and 300

Denier Intermediate Twist Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice. All previous prices withdrawn. Note: Prices on unlisted items can be obtained upon request.

### Celaperm Filament Yarn Prices

	Intermedi	ate Twist	Spinning Twist		
Denier and Filaments	4 & 6-Lb. Cones	Beams	Cones	Beam	
55/15	\$1.37	\$1.38	81.31	\$1.32	
75/20	1.34	1.35	1.28	1.29	
100/26	1.28	1.29	1.22	1.23	
120/40	1.19	1.20	1.13	1.14	
150/40	1.11	1.12	1.06	1.07	
200/52	1.05	1.06	1.01	1.02	
300/80	1.01	1.02	.97	.98	
450/120	.99	1.00	.95	.96	
600/160	.97	.98		****	
900/80	94				

3 to 5 Turns on Cones or Beams - \$.02 Additional

Effective March 11, 1955

# Max Thal (Continued from Page 72)

Currently, true to its function as the industry's fashion leader, Alamac has branched out in a new style trend—the "lustre look" in cotton knits. Being readied for garment cutters right now is a diverse collection of knitted novelties all characterized by a bright and lustrous finish for the first time in years. In these constructions, the lustrous look is achieved by skillful use of solution-dyed filament acetate combined with cotton in textured, bulky effects.

Rich confirmation of the wonderful job Alamac and Max Thal have done in lifting knit goods up to the profitable level of high style materials can be seen by anyone who chooses to wander through the firm's showrooms. Knitted fabrics in bold and brilliant stripings, in luxurious textures and patterns everywhere strike the eye in an overall impression of opulence and dazzling color.

Closer inspection of the racks upon racks of sample pieces leaves no doubt that knitted constructions as produced by Alamac are right up there with the best of woven goods in the category of fine fabrics for the highest priced women's and sports apparel. And what one's eye sees in Alamac's handsome showrooms, the leaders in dress manufacturing along Seventh Avenue, the best designers in New York and California will underline: Max Thal has richly succeeded in his

mission of making knitted fabrics the sought-after

materials of smart fashions.

# Eastman's 50 Yarn (Continued from Page 34)

converters about the permanence of the novel cross section or doughnut shape of Eastman 50 yarn. All the tests performed in the Eastman laboratories indicate that the doughnut shape of the Eastman 50 yarn is as permanent as the shape of a regular acetate fiber.

Ironing tests, for instance, indicate that the doughnut will not collapse at normal ironing temperatures and no allowance need be made in the care of the garment to preserve the fuller, more luxurious hand.

The following is a brief word summary of the many characteristics of Eastman 50 yarn that may be expected in garments with this fiber.

Cross Section Shape
Smooth and circular
Strength
Same as regular Estron
Stretch
Slightly less than regular Estron
Fabric Hand
Gives fuller, more luxurious hand to fabric of same construction
Luster
Higher and more uniform than regular Estron. More intense highlights in fabric.
Stiffness
Somewhat stiffer than regular Estron
Bulk
5% to 10% greater bulk than regular Estron
Processability
Equal to or slightly better than regular Estron

Equal to or better than regular Estron

Equal to or better than regular Estron

# She's better suited with TITANOX®

TITANOX titanium dioxide pigments are first choice for that delustered appearance of suits made of modern synthetics. Efficient delustering at low pigmentation is achieved through the unique light-scattering properties of these pigments. Titanium Pigment Corporation (subsidiary of National Lead Company), 111 Broadway, New York 6, N. Y.; Atlanta 5; Boston 6; Chicago 3; Cleveland 15: Houston 2; Los Angeles 22; Philadelph Portland 14, Ore.; San Francisco Canadian Titanium Pigments Lim Montreal 2; Toronto 1.

Tear Strength

Crease Recovery

Abrasion Resistance

Same as regular Estron

# Celaperm Black Yarn Prices

	Intermedi	iate Twist	Spinning Twist			
Denier and	4 & 6-Lb.					
Filaments	Cones	Beams	Cones	Beams		
55/15	\$1.17	\$1.18	\$1.11	\$1.12		
75/20	1.14	1.15	1.08	1.09		
100/26	1.08	1.09	1.02	1.03		
120/40	.99	1.00	.93	.94		
150/40	.91	.92	.86	.87		
200/52	.85	.86	.81			
300/80	.81	.82	.77	.82 .78 .76		
450/120	.79	.80	.75	76		
600/160	.77	.78		110		
900/80	.74					

900/80

3 to 5 Turns on Cones or Beams — \$.02 Additional
Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

# E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

	_			tate				
	Zero 7	Twist	Low	Twist	Ir	itermed	liate Tw	ist
Denier & Filament	Tubes	Beams	Cones	Beams	2 & 4 Lb. 56" Tbs.	4 & 6 Lb. Tw. Tbs.	Cones	Bms.
45-13 45-24 55-18 55-24 75-8	\$1.10 1.10 .925 .925	\$1.11 1.11 .985 .985	\$1.11	\$1.12 1.12 .99 .99			\$1.17 1.17 1.04 1.04	\$1.18 1.05 1.05
75-24 75-50 100-11	.84 .89 .90	.94	.94	.95		\$.98 1.00	1.00 1.02 1.04	1.01 1.03
100-24 100-32 100-66	.81 .81 .83		.89	.90		.93 .93	.95 .95	.96 .96
120-40 120-50 150-16	.77 .77 .72	.80	.80	.81	\$.81	.85 .85	.86 .86	.87 .87
150-40 200-60 240-80 300-40	.69 .68	.72	.72 .69 .67	.73	.77	.77	.77 .73 .71	.78 .74
300-80 450-120 600-80	.63	.65	.65 .63	.66 .64	.69 .67	.69 .67	.69 .67 .65	.70 .68
600-160 900-44 900-70	.61		.62	.63	.65	.65 .63	.65	.66
900-70 900-240 1800-88 1800-140 2700-132 2700-210 3000-210	.61		.62 .62 .60 .60 .60	.63 .63 .61 .61 .61	.63 .61 .61 .61 .61	.63 .63 .61 .61 .61	.63 .63 .61 .61 .61 .61	.64 .64 .62 .62 .62 .62
3200-160					.61	.61	.61	.62

(A) Regular Twist (2.9 thru 5 T.P.I.)—add \$.02 to Intermediate Twist Price.

(B) 1 lb. %" Tubes—add \$.02 to 2 & 4 lb. %" Tube Price.

(C) 2 lb. Twisted Tubes are the same as 4 & 6 lb. tubes except on 150, 200 and 300 denier Intermediate Twist where the price is \$.01 less

			Cold	or-Sea	led					
	Zero Twist		Low	Low Twist		Intermediate Twist				
Denier &						ted Tubes				
Filament	Tubes	Beams	Cones	Beams	2 Lb.	4 & 6 Lb.	Cones	Beams		
55-18	\$1.245	\$1.315		\$1.32	\$1.35	\$1.35	\$1.37	\$1.38		
75-24	1.18	1.28	\$1.28	1.29	1.32	1.32	1.34	1.35		
100-32	1.14		1.22	1.23	1.26	1.26	1.28	1.29		
150-40	1.03	1.06	1.06	1.07	1.10	1.11	1.11	1.12		
200-60	1.00		1.01	1.02	1.04	1.05	1.05	1.06		
300-40	.95						1.01			
300-80	.95	.97	.97	.98	1.00	1.01	1.01	1.02		

(A) Regular Twist—Add \$.02 to Intermediate Twist Price.
(B) \$.15 per lb. premium will be charged for 300 denier color-sealed items (Except Black) for quantities less than 1000 lbs. per item or the nearest full case.

				Black						
	Zero Twist		Low	Low Twist		Intermediate Twist				
Denier &					Lb.	4 & 6 Lb.				
Filament	Tubes	Beams	Cones	Beams	Ths.	Tw. Tbs.	Cones	Beams		
55-18	\$1.045	\$1.115		\$1.12		\$1.15	\$1.17	\$1.18		
75-24	.96	1.08	\$1.08	1.09		1.12	1.14	1.15		
100-32	.94		1.02	1.03		1.06	1.08	1.09		
150-40	.83	.86	.86	.87		.91	.91	.92		
200-60	.80		.81	.82		.85	.85	.86		
300-40	.75	.77	.77	.78	\$.81	.81	.81	.82		
300-80	.75	.77	.77	.78	.81	.81	.81	.82		
450-120			.75	.76	.79	.79	.79	.80		
600-160			.73	.74	.77	.77	.77	.78		
900-44	.72		.73	.74	.74	.74	.74	.75		
900-70	.72		.73	.74	.74	.74	.74	.75		
900-240			.73	.74	.74	.74	.74	.75		
(A) Reg	ular Tv	rist (2.9	thru 5	T.P.I.)	-add	\$.02 to Int				

(A) Regular Twist (2.9 thru 5 T.P.I.)—add \$.02 to Int. Twist Price.
 (B) 1 lb. %" Tubes—add \$.02 to 2 & 4 lb. %" Tube Price.
 (C) 2 lb. Twisted Tubes are the same as 4 & 6 lb. Twisted Tubes except on 150, 200 and 300 denier Intermediate Twists where the price is \$.01 less.

Specialty Yarns
Same Price as Regular Yarn
Same Price as Regular Yarn

100-22	Int	. Twist 4	b. Cones		\$1.3	9	
Denier &	Nat	Natural		Black		Color-Sealed	
Filament	Cones	Beams	Cones	Beams	Cones	Beams	
100-22 Int. Twist	\$1.36						
200-64 Int. Twist	1.05		\$1.15		\$1.35		
200-64 Reg. Twist	1.08	\$1.09	1.17	\$1.21			
300-80 Int. Twist	1.00						

Terms: Net 30 days. Subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Estron Yarn, Bright or Dull -- White

# Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 19, 1955

	-31101	1 1 41	11, 01	194111	01 0	COLUMN TO SERVICE STATE OF THE PERSON NAMED IN COLUMN TO SERVICE STATE OF THE PERSON NAMED STATE OF THE SERVICE STATE OF THE PERSON NAMED STATE STATE OF THE SERVICE S		1	
	Regular	In	termed Twist		Low	Twist	Zero Twist		icot ams
Denier & Filament	Cones	Cones	Tubes	Beams	Cones	Beams	Tubes	Spun	Zero
55/13	\$1.06	\$1.04	\$1.02	\$1.05	\$.98	\$.99	\$.92 1/2	\$.99	\$.981/
75/19	1.02	1.00	.98	1.01	.94	.95	.84	.95	
75/49	1.04	1.02		1.03					
100/25	.97	.95	.93	.96	.89	.90	.81		
120/30	.90	.88	.86	.89	.82	.83			
150/39	.79	.77	4	.78	.72	.73	.69		
200/50	.75	.73		.74	.69	.70			
300/75	.71	.69		.70	.65	.66	.63		
450/114	.69	.67		.68	.63	.64			
600/156	.67	.65		.66	.62	.63			
900/230	.65	.63	****	.64	4+++	****	.61		
Heavier									.56

**Current Prices** Chromspun—Standard Colors (Except Black)

Denier & Regular		r Twist	Intermed	liate Twist	Low	Twist
Filament	Cones	Beams	Cones	Beams	Cones	Beams
55/13	\$1.39	\$1.40	\$1.37	\$1.38	\$1.31	\$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38		1000	1.11	1.12	1.06	1.07
300/75			1.01	1.02	.97	.98
450/114	****		.99	1.00	.95	.96
900/230			.94	.95		

Current Prices

	Chron	Low Twist &		
Denier & Filament	Regular Twist Cones	Intermed	liate Twist Beams	Spun Twist Beams
55/13	\$1.19	\$1.17	\$1.18	\$1.12
75/19	1.16	1.14	1.15	1.09
100/25	1.10	1.08	1.09	1.03
150/38	.93	.91	.92	.87
200/50	.87	.85	.86	.82
300/75	.83	.81	.82	.78
450/114	.81	.79	.80	.76
900/230	.76	.74	.75	

900/230 .76 .74 .75

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

# RAYON STAPLE and TOW

American Viscose Corp.

Current Prices	
Rayon Staple	Bright and Dull
Regular	\$ .32
Extra Strength	.34
1.0 Denier	
"Viscose 32A"	
"Avisco Crimped" 1.25 Denier	.34
3.0 & 5.5 Deniers	.33
8.0 & 15.0 Deniers	98
"Avisco Smooth"	
8.0, 15.0 & 22.0 Deniers	.37
Short Staple Blend	34
Rayon Tow	
Grouped Continuous Filaments (200,000 Total Denier)	
1.5, 3.0 & 5.5 Denier Per Filament	.34
9.0 Denier Per Filament	
Grouped Continuous Filaments (4400/300 & 2000/1500) Prices of other descriptions on request. Terms: Net 30 days.	65
Celanese Corp. of America	
Current Prices	

Rayon Tow	Bright & Dull
1.5, 3, 5 D.P.F. 8 D.P.F.	20

Courtaulds (Alabama) Inc.

Rayon Staple		
1½ and 3 denier Available in 1½", 1-9/16" and 2".	Bright \$.31	\$.31

# **Piece Goods**

(Continued from Page 61)

finishing without regard to grain. In many cases such savings are certainly unimportant in relation to the damage that is done.

# Position of Newer Synthetics

The non-cellulosic fibers have provided many performance properties which are evidently highly desirable from the consumer viewpoint. Some of these fabrics have caused manufacturing problems for cutters. Fiber producers, mills, cutters and machinery manufacturers have made extensive progress in solving these difficulties.

In home sewing, most of these problems are far less difficult. Fabrics are cut with hand shears which do not heat up. Home sewing machines operate more slowly than industrial machines and the problems of pin holing or thread stretching are less severe. Nevertheless, some of these fabrics have created problems in home sewing which have sometimes prejudiced home economics teachers against man-made fiber fabrics, particularly non-cellulosics.

Recently, however, educational efforts at the home economics level and at the store level have been intensified. Some of this prejudice against noncellulosic fabrics in piece goods for home sewing has been overcome. Meanwhile, these intensive educational and promotional efforts are being continued; and the rising demand for wash-and-wear performance, or at the very least easy-to-keep-up performance, in finished garments is bound to be reflected in a similar interest in home sewing and piece goods.



# for superior finishes...

complete removal of size is a first essential

# RAPIDASE

UNEQUALLED FOR DE-SIZING AT HIGHEST TEMPERATURES AND AT HIGHEST SPEEDS

In concentrations to meet every requirement ... in liquid or powder form ... RAPIDASE is universally used for cottons and all fabrics containing man-made fibres.

WALLERSTEIN COMPANY, INC., 180 Madison Avenue, New York 16, N. Y.

# "Coloray" Spun Dyed Rayon Staple

	1½ Den. 1-9/16"	3 Den.	4½ Den.	Price per Lb.
	(Code n	umbers for	color and deni	er)
Black "	1404	1419	1425	37¢
Tan	8004	8019	8025	39€
Medium Brown	8804	8819	8825	39€
Silver Grey	1004	1019	1025	39€
Terra Cotta	8204	8219	8225	39€
Khaki	3004	3019	3025	40€
Dark Brown	8604	8519	8525	40€
Slate Grey	0804	0819	0825	43¢
Light Blue	4004	4019	4025	44c
Sulphur	2004	2019	2025	44¢
Apple Green	5104	5119	5025	45€
Peacock Blue	4604	4619	4625	46¢
Medium Blue	4204	4219	4225	48¢
Dark Blue	4404	4419	4425	49c
Hunter Green	5404	5419	5425	49€
Indian Yellow	2504	2519	2525	49€
Pink	6004	6019	6025	50∉
Turquoise	4804	4819	4825	50€
Malachite Green	5204	5219	5225	51¢
Red	7004	7019	7025	56€

(In addition to the above, Black is also available in: 1½ den. 1½" (1401) 3 den. 1-9/16" (1416) 4½ den. 2" 3 den. 1½" (1413) 3 den. 2½" (1420) 4½ den. 4")

Terms: Net 30 days, f.o.b. LeMoyne, Alabama. Minimum transportation allowed to points in U.S.A. east of Mississippi River.

# The Hartford Rayon Co.

Div. Bigelow-Sanford Carpet Co., Inc.

# Rayon Staple

Effective February 8, 1956

REGULAR		
	1.5 denier Bright 1½" and 2"	32€
VISCALON 66 (Crimped)		
	8 denier 2" Bright	
	15 denier 3" Bright	
	15 denier 3" Dull	35€

"KOLORBON"-Solution Dyed Rayon Staple

8 Denier Bright	15 Denier Dull	15 Denier Bright
45¢	45¢	7411
45¢	45¢	
45e	45¢	
45e	45c	
45¢	45¢	
45c	45¢	
		55¢
		454
48¢	484	409
454	45¢	
484	484	
454	454	
45¢	45¢	
		Bright Dull  45¢ 45¢ 45¢ 45¢ 45¢ 45¢ 45¢ 45¢ 45¢ 45¢ 45¢

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

# ACETATE STAPLE and TOW

# Celanese Corp. of America

**Current Prices** 

#### Staple

Celanese Acetate Staple	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	\$.32
12 & 17 Individual Deniers	.33
35 & 50 Individual Deniers	.36
%" to %" cut length (all deniers)-Premium	.03
Variable Acetate Fibers	.30
35 Individual Denier Flat Filament Acetate	.38

# Tow

Celanese Celatow Acetate	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	8.34
12 & 17 Individual Deniers	.35
35 & 50 Individual Deniers	.37

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice. All previous prices withdrawn.

# NON CELLULOSIC YARN

# NYLON

Allied Chemical and Dye Corporation
"Caprolan" Tensile Tough Nylon

Effective September 24, 1956

# Heavy Yarns

Denier	Fila- ment	Turn/	Twist	Type**	Package	Price/Lb.
2100	408	0	0	HB	Paper Tube*	\$1.27
2100	112	0	0	HB	Paper Tube	1.30
2500	408	0	0	HB	Paper Tube	1.27
2500	112	0	0	HB	Paper Tube	1.30
3360	544	0	0	HB	Paper Tube	1.26
3360	168	0	0	HB	Paper Tube	1.29
4200	680	0	0	HB	Paper Tube	1.26
4200	224	0	0	HB	Paper Tube	1.29
5000	816	0	0	HB	Paper Tube	1.25
5000	280	0	0	HB	Paper Tube	1.28
7500	1224	0	0	HB	Paper Tube	1.24
10,000	1632	0	0	HB	Paper Tube	1.24
15,000	2448	0	0	HB	Paper Tube	1.23

15,000 2448 0 0 HB Faper 1400
Terms—Net 30 days.
These prices are subject to change without notice. All prices are quoted F.O.B. shipping point.
Lowest freight cost prepaid or allowed east of Mississippi River.
\* Paper Tubes non-returnable, no charge. Standard Put-up: 10 lb. package.
\*\* Type is used to describe luster and tenacity.
Type HB: High Tenacity, Bright.

# American Enka Corporation

Nylenka Filament Yarn Prices

Effective December 21, 1956

Denier & Filament	Twist	Luster	Tenacity	Package	Yarn Weight per Package	Price per Pound, Std.	Price per Pound, Sub.
15/1	0.52	semi-dull	Normal	Pirn	1 lb.	\$5.25	\$5.00
30/6	0.5Z	semi-dull	Normal	Pirn	2 lb.	2.36	2.21
40/8	0.5Z	semi-dull	Normal	Pirn	2 lb.	2.01	1.81
50/13	0.5Z	semi-dull	Normal	Pirn	2 lb.	1.91	1.76
100/24	0.52	semi-dull	Normal	Pirn	2 lb.	1.65	1.60
100/32	0.5Z	semi-dull	Normal	Pirn	2 lb.	1.65	1.60
200/34	0.5Z	bright	Normal	Pirn	2 lb.	1.49	1.44
200/34	0.5Z	bright	Normal	Cone	4 lb.	1.49	1.44
210/34	0.5Z	bright	High	Pirn	2 lb.	1.49	1.44
210/34	0.5Z	bright	High	Cone	4 lb.	1.49	1.44
840/140	0.52	bright	High	Pirn	2 lb.	1.30	1.20
840/140	0.5Z	bright	High	Cone	4 lb.	1.30	1.20
840/140	0.5Z	bright	High	Beam	-	1.30	1.20

Pirns charged at 8.25 each. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation. Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

# The Chemstrand Corp.

Current Prices

Effective December 19, 1956

Denier 10	Filament 1	Twist	Type*	Package Bobbins	Standard \$8.42	Second \$7.81
15	î	o	SD	Bobbins	5.25	5.00
15	î	O	D	Bobbins	5.30	5.00
15	î	0	D	Spools	5.41	
30	10	Z.	SD	Bobbins	2.36	2.21
30	10	Z	HSD	Bobbins	2.36	2.21
40	7	Z	SD	Bobbins	2.11	1.75
40	13	Z	SD	Bobbins	2.01	1.81
40	13	7.	SD	Spools	2.11	
40	13	Z	D	Bobbins	2.06	1.81
40	13	Z	D	Spools	2.16	
50	17	Z	SD	Bobbins	1.91	1.76
70	34	Z	SD	Bobbins	1.71	1.66
70	34	Z	В	Bobbins	1.71	1.66
70	34	Z	D	Spools	1.86	
80	26	Z Z Z	SD	Bobbins	1.71	1.56
100	34	Z	SD	Bobbins	1.65	1.60
100	34	Z	HB	Bobbins	1.70	1.60
140	68	Z	SD	Bobbins	1.60	1.55
200	34	Z	B	Bobbins	1.49	1.44
200	68	Z	SD	Bobbins	1.49	1.44
210	34	Z	HB	Bobbins	1.49	1.44
210	34	Z.	HB	Spools	1.54	
210	34	Z	HB	Beams	1.54	
260	17	2.	HB	Bobbins	1.49	1.39
260	17	Z	HB	Spools	1.54	
420	68	Z	HB	Bobbins	1.39	1.29
630	102	Z	HB	Bobbins	1.39	1.29
840	136	Z	HB	Bobbins	1.34	1.24
840	136	Z	HB	Tubes	1.34	1.24
840	136	Z	HB	Beams	1.34	
840	140	Z	HB	Beams	1.30	1.20
840	140	Z	HB	Tubes	1.30	1.20

\*Types: D—Dull: SD Semi-dull; B—Bright; H—High tenacity.
Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; spools invoiced at \$77.00 and \$95.00 depending on type; and beams and crates for beams are invoiced at \$220 and \$25 respectively.

Prices subject to change without notice.

# Report from Japan

In Montreal, it was pointed out that total Canadian production of cotton blouses and sport shirts is estimated to be only 700,000 dozen, or less than twice the amount of Japanese quota! Canadian output of cotton trousers and slacks (including work pants) was said to be about 850,000 dozen. In short, Japanese trade experts in Government fear quotas will not serve to reduce pressure in Canada for stronger tariff protection against Japanese imports.

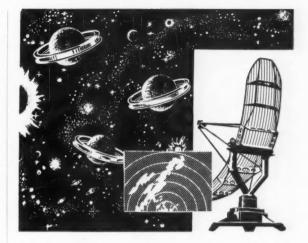
Rayon Fabric Exports Higher— Export reports 1956 show that shipments of rayon fabrics to the U.S. totalled almost 3,000,000 square yards, a gain of about 75% over 1955. The figure is divided almost evenly between spuns and filaments, but the latter showed the greatest gain. Exports of silk fabrics to the U.S. were up about 40%, cottons were down 15%, woolens and worsteds were up almost 100%.

See Increase in Synthetics Shipments-The advent of the New Year has brought with it the usual rash of predictions. For example the Ministry of International Trade and Industry predicts that textile exports will gain about 15% over 1956, and that most important gains will be scored by rayon, acetate and synthetic products. Even so, exporters of spun rayon fabrics say Government's figures are too conservative. By contrast, lower figures are predicted for cotton and wool yarns and fabrics.

Looking ahead even further, the Government has aired its revised predictions for the 1960 fiscal yearthe target year in which the country's economy is sup-posed to be brought into balance. Those figures show that newer synthetic fiber manufacturing industries are expected to rank in importance with rayon and surpass wool entirely. (Small as it is, production of newer synthetics in Japan is already larger than that of raw silk, historically Japan's major textile fiber for export.)

Late News Notes-By the time this is printed, it is expected that Japanese Government will have formally approved contract between Imperial Chemical Industries of England and Toyo Rayon Co., and Imperial Rayon Co., to manufacture terylene. Several Japanese exhibitors at the New York Trade Fair in April will show synthetic fabrics and other products (mostly nylon). This will give American textile men a small view of extent to which Japanese manufacturers have developed end-products of these fibers, which have only been available here a few years.





# What's the word from outer space?

Outworn rings can beam in an invasion of badrunning work that even the finest machinery cannot defend against. Install new DIAMOND FINISH and you'll thank your lucky stars!

# (MASS.) WHITINSVILLE

SPINNING



Twister Rings since 1873

Southern Representative: W.K. SHIRLEY: P.O. Box 406, Belmont, N. C.

# MILL SCISSORS

(Forged Steel)



No. 100 - (Only Size 4")



No. 200 - (Sizes 31/2", 4" and 5")

For over 35 years Collins has been a leading supplier of dependable Mill Scissors to Textile Mills.

COLLINS SUPPLY & EQUIPMENT CO. 1357-97 Monsey Ave. Scranton 2, Pa.

# E. I. du Pont de Nemours & Co.

Textile	Fibers Dept.		
Current	Prices	Nylon	Yarn
Donier	Tuene/	,	

	11003	1411	on rum		
Denier & Fil-	Turns/ Inch	,		1-4	0-4
ament	& Twist	Type	Package	Ist	2nd Grade
7-1	0	200	Bobbin	Grade \$9.47	\$8.82
10-1	0	200	Bobbin	8.42	7.82
12-1	0	200	Bobbin	7.35	6.85
15-1	0	200	Tricot Bms.	5.36	0.00
15-1	0	200	Bobbin	5.25	5.00
15-1	0	680	Tricot Bms.	5.41	0.00
15-1	0	680	Bobbin	5.30	5.00
20-1	0	200	Bobbin	4.42	4.12
20-7	0.5Z	200	Bobbin	2.91	2.61
20-7	0.5Z	680	Bobbin	2.96	2.61
20-20	0.7Z	209	Bobbin	6.00	2.01
20-7	0.5Z	200	Tricot Bms.	3.02	
30-10	0.5Z	200	Bobbin	2.36	2.21
30-10	0.5Z	200	Tricot Bms.	2.46	4.40
30-10	0.5Z	680	Bobbin	2.41	2.21
30-10	0.5Z	680	Tricot Bms.	2.51	an - an A
30-26	0.5Z	200	Bobbin	2.49	2.21
40-7	0.5Z	200	Bobbin	2.11	1.75
40-13	0.5Z	200	Bobbin	2.01	1.81
40-13	0.5Z	200	Tricot Bms.	2.11	1.01
40-13	0.5Z	400	Bobbin	2.13	1.90
40-13	0.5Z	670/680	Bobbin	2.06	1.81
40-13	0.5Z	670/680	Tricot Bms.	2.16	1.01
40-34	0.5Z	200	Bobbin	2.21	1.81
50-17	0.5Z	200	Bobbin	1.91	1.76
50-17	0.5Z	680	Bobbin	2.01	1.76
70-17	0.5Z	200	Bobbin	1.71	1.66
70-34	0.5Z	100/200	Bobbin	1.71	1.66
70-34	0.5Z	300	Bobbin	1.76	1.66
70-34	0.5Z	680	Bobbin	1.76	1.66
80-26	0.5Z	200	Bobbin	1.71	1.56
100-34	0.5Z	200	Bobbin	1.65	1.60
100-34	0.5Z	300	Bobbin	1.70	1.60
100-34	0.5Z	680	Bobbin	1.70	1.60
100-50	0.5Z	200	Bobbin	1.71	1.60
140-68	0.5Z	200	Bobbin	1.60	
140-68	0.5Z	300	Bobbin	1.65	1.55 1.55
200-34	0.72	100	Bobbin	1.49	
200-34	0.7Z	680	Bobbin	1.54	1.44
200-68	0.72	200	Bobbin	1.54	
210-34	0.72	300	Bobbin	1.49	1.46
210-34	0.7Z	300			1.44
260-17	1Z	100/300	Beam Bobbin	1.54	1.00
400-68	0.7Z	100/300		1.49	1.39
420-68	1Z	300	Bobbin Bobbin	1.39	1.29
780-51	0.7Z	300		1.39	1.29
800-140	0.5Z	100	Bobbin	1.39	1.29
840-136	1Z		Bobbin	1.39	1.29
		300	Bobbin/Al. Tube	1.34	1.24
840-140	0.5Z	300/700	Al. Tbs/Beam	1.30	1.20
Color-Seal					
Denier &	Turns/Inc			1st	2nd
Filament	& Twist	Type	Package	Grade	Grade
70-34	0.52	140	Bobbin	\$2.06	\$2.01
200-34	0.77	140	Robbin	1 84	1.79

Color-Scale	ed Yarn				
Denier &	Turns/Inch			1st	2nd
Filament	& Twist	Type	Package	Grade	Grade
70-34	0.52	140	Bobbin	\$2.06	\$2.01
200-34	0.7Z	140	Bobbin	1.84	1.79
260-17	1Z	140	Bobbin	1.84	1.79
Industrial I	Yarn			Price	/Lb.
2520-420	0	300/700	Paper Tube	\$1.	27
4200-700	0	300/700	Paper Tube	1.	25
5040-840	0	300/700	Paper Tube	1.	25
7560-1260	0	300/700	Paper Tube	1.3	24
10080-1680	0	300/700	Paper Tube	1.	24
15120-2520	0	300/700	Paper Tube	1.	23
These price	s are subject	to change	without notice.	Terms: Net 3	30 Days.

Types
Type 100—Bright, normal tenacity.
Type 140—Bright, color-sealed, black, normal tenacity.
Type 209—Semidull, normal tenacity.
Type 209—Semidull, normal tenacity.

Type 200—Semidull, normal tenacity.

Type 300—Bright, high tenacity.

Type 400—Semidull, high tenacity.

Type 670—Dull, normal tenacity.

Type 670—Dull, normal tenacity.

Type 700—Bright, high tenacity.

Type 700—Bright, high tenacity.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item.

Bobbins—25 cents or 45 cents depending on type Aluminum Tubes—40 cents each

Tire Cord Beams—\$220.00 each

Cradles for Tire Cord Beams—\$115.00 each

Tricot Beams—\$95.00 each Cradles for Tricot Beams—\$130.00 each (Beams and Cradles are deposit carriers and remain the property of I. du Pont de Nemours & Co., Inc.)

# POLYESTER

# E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** "Dacron"\* Denier & Filament 30-20 40-27 Turns/Inch Type\*
57
56
55
57
56
55
57
56
55
57
56
55
57
56
55
59 Luster 1st Gr \$2.86 2.41 2.41 2.46 \$2.01 2.01 2.01 Dull Semidull 40-27 40-27 70-34 70-14 70-34 100-34 Bright Dull Semidull Bright Bright Dull Semidull 2.06 \$1.94 1.89 1.91 140-28 150-68 220-50 250-50 Bright Semidull Bright Bright 1.86 Semidull 1100-250 Bright

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

# Yarn Types

	raili type.
Type:	
	51-Bright, high tenacity.
	55-Bright, normal tenacity.
	56-Semidull, normal tenacity.
Type	57-Dull, normal tenacity.
Type	50 Semidull high tenacity

Type 59—Semidull, high tenacity.

Tubes are invoiced as a separate item at \$.70 each. The only exception to this is an \$.30 charge on the tubes used for 30 Denier Dull.

All tubes are returnable for credit.

"DACRON" is DuPont's registered trade-mark for its polyester

# NON CELLULOSIC STAPLE & TOW ACRYLIC

# The Chemstrand Corp.

**Current Prices** 

"Acrilan"	
2.0 denier Semi-dull staple and tow	\$1.18
2.5 denier Hi-Bulk Bright and Semi-dull staple and tow	
3.0 denier Bright & Semi-dull staple and tow	
5.0 denier Bright & Semi-dull staple and tow	1.12
8.0 denier Bright and Semi-dull staple and tow	1.12
Hi-Bulk staple Semi-dull	
Terms: Net 30 days. Freight prepaid to points east	of the Missis-

# sippi River. Carbide and Carbon Chemicals Co.

Div. Union Carbide and Carbon Corp.

Textile Fibers Dept.

Effective November 1, 1955

# Dynel Staple

Natural Dynel	
	\$1.05 per lb
Whitened Dynel, and Dynel Spun with Light	
Colors: Blonde, or Gray	
3 and 6 Denier, Staple and Tow	1.20 per lb
Dynel Spun with Dark Colors: Black, Charcoal, and Brown	n
3 and 6 Denier, Staple and Tow	1.30 per lb
Drices are guated to b South Charleston W Vo	

#### E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

**Current Prices** 

"Orlon"** Acrylic Staple & Tow	"Orlon"**	Acrylic	Staple	&	Tow
--------------------------------	-----------	---------	--------	---	-----

Type 42 1.0 Denier Semidull & Bright—Staple only 2.0 Denier Semidull	
3.0 Denier Semidull & Bright 3.0 Denier Semidull Color-sealed Black—Staple only	1.28
4.5 Denier Semidull 6.0 Denier Semidull & Bright	1.20
Tow—Total Denier 470,000 Staple Lengths—1½", 2", 2½", 3", 4½"	

High Shrinkage Staple same price as Regular Staple Type 39 \$1.06
This product is designed for woolen system spinning and is a blend of predominately heavy deniers (average 4.2) with a variable cut

of predominately neary uchies between the states of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River rossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River. Terms: Net 30 Days.

\*\* "ORLON" is DuPont's registered trade-mark for its acrylic fiber.

# Eastman Chemical Products, Inc. Tennessee Eastman Co.

Effective November 15, 1956

Verel

Dull and Bright

Deniers
Juli and Bright
\$1.10 per pound
Prices are subject to change without notice.
Terms: Net 30 days. Payment—U. S. A. dollars.
Transportation charges prepaid or allowed to destination in the
United States east of the Mississippi River. Seller reserves the right
to select route and method of shipment. If buyer requests and seller
agrees to a route or method involving higher than lowest rate buyer
shall pay the excess of transportation cost and tax.

# NYLON

# American Enka Corp.

Nylenka (Nylon Six Staple)

Denter 3	Luster semi-dull	Length (Inches) 1 1/8, 1 1/2, 2, 2 5/8, 3, 4 1/2	Price per pound \$1.28
6	bright	3, 41/2	1.28
8	bright	2%	1.20
10	bright	3	1.20
15	bright	3	1.20
-	2	week Mickey of the same war.	

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

# **News Briefs**

(Continued from Page 77)

Tycora Expansion

Textured Yarn Co., Inc., Phila-delphia, Pa., producer of Tycora yarns, has launched a major expansion program for completion this year. Two new plants are being added to nearly triple the firm's production of modified continuous filament fibers. Operations at the new Elkton, Md., plant are slated to start in late February. The other plant at Morovis, Puerto Rico, is scheduled to begin production of Tycora varns intended for use in P. R. markets, at about the same time.

Saco Moves Branch

The Saco-Lowell Shops Southern Repair Parts Depot, formerly located in Sanford, N. C., has been moved to Easley, S. C. The relocation was started last November, and since January 1 repair orders have been shipped to the Easley Depot. The move was undertaken to expedite service. The depot is centrally located in the area where the majority of southern textile mills operate.

Custom Scientific-Uster

Agreement

Custom Scientific Instruments, Inc. and Uster Corp. have entered into an agreement which makes Uster the sole distributor of the Custom Tension Recordograph. Formerly known as High Speed Recording Tensiometer, the unit was developed by Celanese Corp. of America.

# Personnel Changes

H. F. Tindel has transferred from Charlotte Application & Product Development Department of Celanese Corp. of America to the company's New York office, in the capacity of textile sales development representative.

Harold F. Merritt has retired from the vice presidency of Solvay Process Division, Allied Chemical & Dye Corp. as of December 31,

1956.

Althouse Chemical Co., division of Crompton & Knowles Corp. Succeeding him as president is Howard F. Bjork who leaves the post of president of Index Chemical Co.

Harold C. Kelley has been promoted to general superintendent in charge of manufacturing at Berkshire Hathaway, Inc.

Emelie Tolley has been appointed fabric coordinator of Celanese Corp. of America's textile division.

John P. Norman has been appointed sales representative for R. E. L. Holt, Jr. & Associates, Inc. He will cover the Georgia-Alabama territory and will reside in West Point, Georgia.

Frederick E. Paul has resigned from his position with Wildman Mfg. Co. He was vice president and manager prior to Wildman's acquisition by Draper Corp.

Dr. Carl M. Conrad of Southern Regional Research Laboratory. United States Agricultural Re-search Service, has been elected chairman of the American Chemical Society's division of Cellulose Chemistry for 1957. He succeeds Reid L. Mitchell of Rayonier, Inc.

David Gross has been appointed to the newly created position of general merchandise manager of William Carter Co. Succeeding him as sales planning manager is Fred C. Wagg, Jr. Formerly head of the sales planning department Mr. Wagg leaves this position to his assistant James T. Briggs. In the same company Oliver B. Beckwith has been appointed quality control director.



Samuel I. Parker, vice president of Ciba Co., Inc. retired on November 1 after 25 years with the com-

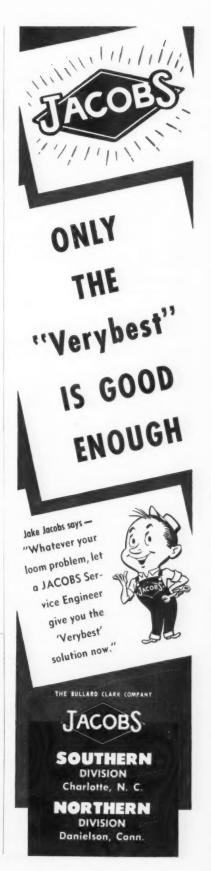
Standish W. Holmes has joined American Enka Corp. as merchandising coordinator and will assist M. Boylan Carr, manager of the textile sales department.

J. Lee Marsh has been appointed vice president of Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp.

Dr. Thomas G. Fox, head of the polymers research laboratory of Rohm & Haas Co., has been elected chairman of the American Chemical Society's Division of Polymer Chemistry for 1957.



S. I. Parker Louis C. Goode has been appointed plant manager of National Aniline Division, Allied Chemical & Dye Corp., Moundsville, W. Va. He succeeds Ross M. Sims, deceased. Fred Hauschildt has rejoined Dan River Mills, Inc. New York, in a sales capacity after having been with Reeves Bros. Dr. C. Scott Althouse has been elected chairman of the board of Dr. C. S. Althouse H. F. Bjork



# E. I. du Pont de Nemours & Co.

Textile Fibers Dept **Current Prices** 

Nylon Staple and Tow

		Staple		
Denier	Type	Lengths	Tow Bundle	
1.5	200	1 1/a "-4 1/2"	None made	\$1.33
1.5	201	11/4"-41/2"	None made	1.35
3.0	100/200	11/8"-41/2"	430M	1.28
3.0	101/201	1 1/4"-41/2"	455M	1.30
6.0	100	1 1/2 "-4 1/2"	330M	1.28
6.0	101	11/2"-41/2"	345M	1.30
15.0	100	11/2"-61/2"	330M	1.20
15.0	101	1 1/2 "-6 1/2 "	None made	1.22
Comin	lamenths and	mandadadad da dha	nameta alantum	ammagita anah

aple lengier above. lengths are restricted to the range shown opposite each ove. The actual cut lengths within these ranges are as follows:

11/8, 11/2, 2, 21/2, 3, 41/2 and 61/2

Types

Type 100 Bright, normal tenacity, not crimpset.
Type 101 Bright, normal tenacity, crimpset.
Type 201 Semidull, normal tenacity, rot crimpset.
Type 201 Semidull, normal tenacity, rot crimpset.
Type 201 Semidull, normal tenacity, crimpset.
These prices are subject to changes without notice.
Terms—Net 30 Days.
Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

# Industrial Rayon Corp.

Effective November 29, 1956

Nylon Staple

1.5 denier \$1.33 per lb.
2, 3 and 6 denier 1.28 per lb.
8 and 15 denier 1.20 per lb.
Bright and semi-dull, required length.
Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi

# POLYESTER

# E. I. du Pont de Nemours & Co.

Textile Fibers Dept. **Current Prices** 

"Dacron"\* Staple and Tow

Denier	Luster	Туре	Length	Tow Bundle	1st Gr.
1.25	Semidull	54	11/4"-3"		\$1.56
1.5	Semidull	54	11/4"-3"		1.51
3.0	Semidull	54	11/4"-41/2" & Tow	375M- 500M	1.41
4.5	Semidull	54	1¼"-4½" & Tow	375M- 500M	1.41
6.0	Semidull	54	11/4"-41/2" & Tow	375M- 500M	1.41

Terms: Net 30 Days.
F. O. B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

# POLYVINYL ACETATE

# American Viscose Corp.

Effective October 1, 1956

"Vinyon"® Staple \$.80 per lb.
.80 per lb.
.90 per lb.
.90 per lb.
.80 per lb.
.90 per lb.
.90 per lb.
.90 per lb. 3.0 denier \( \frac{1}{4}\)" unopened \( 3.0\) " 1\( \frac{1}{4}\)" unopened \( 3.0\) " 1\( \frac{1}{4}\)" opened 2" opened 2" unopened 1" opened 3½" opened " unopened Terms: Net 30 days.

# PROTEIN

# Virginia-Carolina Chemical Corp.

Fiber Division

Effective January 15, 1951

	vicara Staple	
	Standard Crimp	Highly Crimped
3 Denier	\$1.00 per lb.	\$1.05 per lb.
	1.00 per lb.	1.05 per lb.
7 Denier	1.00 per lb.	1.05 per lb.
	Bleached "Vicara" Staple	
	Standard Crimp	Highly Crimped
3 Denier	\$1.10 per lb.	\$1.15 per lb.
5 Denier	1.10 per lb.	1.15 per lb.
7 Danies	1 10 man lb	1 15 15

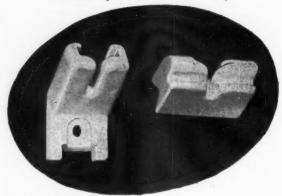
Staple length % to 6 in.

Supplied in staple lengths or as continuous tow (270,000 filaments).

Terms: Net 30 days.

Prices f.o.b. Tartville, Conn. on 10% moisture regain basis.

# Nothing is impossible unless you have to do it yourself.



We who manufacture

# LAMBERTVILLE THREAD GUIDES

can't make a guide that lasts forever. We can and do produce long wearing dimensionally accurate guides that give the most economical and satisfactory service. Available in white or 'Durablu' finish. Write for catalog and samples.

AND MANUFACTURING COMPANY LAMBERTVILLE **NEW JERSEY** 



# The Borregaard Co., Inc.

Norway House, 290 Madison Avenue NEW YORK 17, NEW YORK

Norwegian Viscose Rayon Staple Fiber

Bright



Dull

Sole Agent For United States, Canada, Mexico, Cuba

# THE TRUMETER STANDARD MODEL

with TICKET PRINTER

Unique rollers brake adjustable brake arrangement speed operation. for

mounted to almost any rolling system.



Write for Literature of Counting and Measuring Machines. TRUMETER CO., 1265 BROADWAY, NEW YORK CITY, N. Y. IN CANADA: Dominion Electrohome Industries Limited KITCHENER, ONTARIO

# **Business Service** Section

Exclusively for Business, Laboratory and Mill Services; Positions and Men Wanted; Business Opportunities; Mill Properties Wanted or For Sale; Reconditioned Ma-chinery and Equipment, etc.

CLASSIFIED RATES
Per Inch
2 columns to the
page, each column 8
inches deep
1 inches 15.00
2 Inches 22.50
4 Inches 28.00
5 Inches 35.00
6 Inches 42.00
6 Inches 49.00
7 Inches 52.00

CLASSIFIED RATES

# SURPLUS RAYONS, ACETATES and NYLON YARNS WANTED

all deniers on cones, skeins or cakes, small and large lots. Also creel Cut-outs.

# ALTEX SALES INC.

18 West 27th St.

**New York City** 

LExington 2-9324

#### CAREER WANTED

Veteran 25, B.S. '54 Degree Lowell Technical—willing, capable and ambitious young man desires opportunity in textiles, with future, New York area. Some textile experience.

> BOX 774 MODERN TEXTILES MAGAZINE 303 Fifth Ave., N. Y. 16, N. Y.

#### CONFIDENTIAL EMPLOYMENT SERVICE

If you are available for a good paying position in textiles, it will pay you to have your application in our files. Negotiations are confidential. No fee to be paid unless you accept employment through us. CHARLES P. RAYMOND SERVICE, Inc.

294 Washington St. Boston 8. Mass.

Phone: Liberty 2-6547 CONFIDENTIAL EMPLOYMENT SERVICE Over 55 Years in Business

# SURPLUS YARNS WANTED DACRON — NYLON — RAYON and all others

The Yarn Exchange, Inc. 358 Fifth Ave., N. Y.1, N. Y. BRyant 9-9288

# CHIEF ENGINEER

Graduate Mechanical Engineer with at least 10 years experience in Rayon Industry, preferably in staple, to take charge of Engineering Department. Scope of position covers maintenance, power, design and construction. Administrative ability required.

Please send full resume and salary requirements to:

> Hartford Rayon Company Rocky Hill, Connecticut

# DACRON, NYLON, RAYON & ACETATE BOUGHT AND SOLD YARNS

# SIDNEY BERTNER COMPANY

Empire State Bldg.

New York City

Oxford 5-1170

# Make Your Reservations Now!

The April Issue of MTM will preview the Knitting Arts Exhibition in Atlantic City, April 29 to May 3, 1957.

Closing date for Advertising Forms— March 5.

For advertising space in this important issue write

MODERN TEXTILES MAGAZINE 303 Fifth Ave., N. Y. 16, N. Y.

# Calendar of Coming Events

Feb. 4-8—ASTM Committee Week. Benjamin Franklin Hotel, Philadelphia, Pa. Feb. 6—AATT monthly meeting. Vanderbilt Hotel, New York, N. Y. Feb. 25-27—International Heating & Air-Conditioning Exposition. International Amphitheater, Chicago, Ill. Feb. 25-28—Cetton Research Clinic, sponsored by NCC, Savannah, Ga. Feb. 27-28—Cotton Research Clinic, sponsored by NCC, Savannah, Ga. Mar. 1—AATCC New York Section. Hotel Delmonico, New York, N. Y. Mar. 6—AATT monthly meeting. Vanderbilt Hotel, New York, N. Y. Mar. 14-5-authern Textile Methods and Standards Association meeting. Clemson House, Clemson, S. C. Mar. 14-15—Textile Research Institute annual meeting. Hotel Commodore, New York, N. Y. N.

Mar. 21-23—Division of High-Polymer Physics of American Physical Society.

University of Pennsylvania, Philadelphia, Pa.

Mar. 28-29—Textile Quality Control Association meeting. Clemson House, Clemson, S. C.

Apr. 3—AATT monthly meeting. Vanderbilt Hotel, New York, N. Y.

Apr. 4-6—American Cotton Manufacturers Institute annual meeting. Biltmore Hotel, Palm Beach, Fla.

Apr. 23-24—National Knitted Outerwear Association annual meeting. Hotel Waldorf-Astoria, New York, N. Y.

Apr. 29—Underwear Institute annual meeting. Traymore Hotel, Atlantic City, N. J.

Apr. 29-May 3rd—Knitting Arts Exhibition. Auditorium, Atlantic City, N. J.

San't Andrea

A.B.

# Index to Advertisers

(\*See previous or subsequent issues)

Abbott Machine Company	
Acrometal Products, Inc.	
Allentown Bobbin Works, Inc.	
Allied Chemical & Dye Corp	
National Aniline Div. 4	
	4, 40
Nitrogen Division	
Solvay Process Division	
Althouse Chemical Co.	
American Aniline Products, Inc.	37
American Bemberg	13
American Enka Corp.	29
American Lava Corp. IV C	
American Moistening Company	
American Viscose Corp.	25
Antara Chemicals Div. General	
Dyestuff Corp.	17
Apex Chemical Company, Inc.	
Arkansas Co., Inc.	24
Armstrong Cork Co.	
Atlantic Rayon Co.	
Atlas Electric Devices Co	

Baker & Company, Inc.	
Barber-Colman Co.	
Birch Bros., Inc.	
Booth, Benjamin Co.	
Borregaard Co., Ic., The	8
Butterworth & Sons Co., H. W.	5

Carbide & Carbon Chemicals Co.

A Division of Union Carbide
& Chemical Corp.
Textile Fibers Dept.
Carter, A. B. Inc.
Celanese Corp. of America,
Yarn Div.
Ciba Company, Inc.
Chemstrand Corp.
Cocker Machine & Foundry Co.
Collins Supply and Equipment
Co.
Columbia-Southern Chem. Corp.
Corn Products Sales. Co.
Cosa Corporation
Courtaulds (Alabama), Inc.
Crompton & Knowles Loom
Works
Curtic & Marble Machine Co

Dary Ring Traveler Co.	83
Davison Publishing Co.	
Dayton Rubber Co., The	4
Dobson & Barlow, Ltd. II Cov	er
Draper Corporation	
Du Pont de Nemours & Co., E. I.	
Dyestuff Department	
Textile Fiber Department	21
Du Pont de Nemours & Co., E. I. Dyestuff Department	* 21

Curtis & Marble Machine Co.

Eastman Chem. Pro. Inc. 27.	49
Edda International Corp.	10
Emery Industries, Inc.	
Engineered Plastics, Inc.	

Foster	rt Co., W. F. Machine Co. Associates, Ernest L.	38 28	
Gaston	County Dyeing Machine		

Gaston County Dyeing Machine	
Co. Geigy Chemical Corp.	47
General Dyestuff Corp.	
Gessner Company, David Globe Dye Works Co.	

Hart Products Corp.	55
Hartford Machine Screw Co.	
Hartford Rayon Co., Div. of Bige-	
low-Sanford Carpet Co., Inc.	6
Hayes Industries, Inc.	20
Heany Industrial Ceramic Co	8
Heresite & Chemical Co III Co.	ver
Herr Mfg. Co., Inc.	54
Hoffner Rayon Co.	77
Howard Bros.	
Hubinger Company	

Ideal Industries, Inc.		
Industrial Rayon Corp	10, 11	. 3
Instron Engineering Cor		
Interchemical Corp		

Jacobs, E. H., Northern & Southern Division Johnson Corp., The	87
Kenyon Piece Dyeworks, Inc. Kiddie Manufacturing Co., Inc. Knitting Arts Exposition	60

Co. 8 Laurel Soap Mfg. Co. 7 Lindly & Co., Inc.	Lamber						88
Lindly & Co., Inc.	Laurel	Soap	Mfg.	Co.			79
Lockwood-Greene Engineers, Inc.						Inc.	

Marshall and Williams Corp.	7
McBride Co., Edward J. Mica Insulator Co.	
Milton Machine Works, Inc.	
Mitchell-Bissell Co.	5

Nasil, J. M. Co.
National Drying Machinery Co.
National Ring Traveler Co.
National Vulcanized Fibre Co.
Lestershire Spool Div
New Departure, Div. of Gen.
Motors
New England Bobbin & Shuttle
Co
New York & New Jersey
Tubricant Co

Nash, J. M. Co..

Nopco Chemical Co.

Olin	Mathieson	Chem.	Co
m:	-1- 0 Ti1	TAJ	

	Inc.	75

53

	Inc., Robert Sample Card Co., Inc.
Riggs &	Lombard, Inc.
Riordon	Sales Corp., Ltd.
Roberts	Company

Sandoz Chemical Works, Inc.

14

44

3

41

41

81 88

Sayles Finishing Plants, Inc.
Scott Testers, Inc.
Simco Co., The
Sirrine Co., J. E.
Solvay Process Div., Allied
Chemical & Dye Corp.
Sonoco Products Co.
Southern Shuttle Div.,
Steel Heddle Mfg. Co
Standard Chemical Products, Inc.
Stanley Works-Magic Door Div.
Stauffer Chemical Company
Steel Heddle Mfg. Co.
Stein Hall

Svenska Textilmaskin Fabriken.,

Lay 101 Dilles de Col
Tennessee Corp.
Textile Hall Corp.
Timron Development & Mfg.
Corp.
Titanium Pigment Corp.
Traphagen School of Fashion
Trumeter Co.

Taylor-Stiles & Co.

Turbo Machine Co.

United Piece Dye Works, The	
U. S. Ring Traveler Co.	
U. S. Textile Mach. Co.	22
Universal Winding Co.	12
Uster Corp.	26

Van Vlaanderen Machine Co	
Veeder-Root, Inc.	
Victor-Ring Traveler Co.	16
Virginia-Carolina Chemical	
Corp.	
Von Kohorn International Corp.	9

Waldron, John Corp	
Walton & Lonsbury	
Watson-Williams Mfg. Co.	
West Point Foundry & Mach. Co.	
Whitin Machine Works	15
Whitinsville Spinning Ring Co	85

Zelomek Associates, A. W. Inc.

#### **BUSINESS SERVICE**

Charles P. Raymond Service, Inc. The Yarn Exchange, Inc.	89
Altex Sales, Inc.	88
Hartford Rayon Co.	89
Sidney Bertner Co.	88

# HERESITE

REG. U. S. PAT. OFFICE

Many Rayon manufacturers have availed themselves of the protection afforded by HERESITE. The unique properties of this coating include chemical resistance and mechanical strength. The general value of HERESITE to the rayon industry is demonstrated by its ability to prolong the life of

Traverse bars and arms . . . Complete cake wash machines . . . Soft water storage tanks . . . Blowers . . . Fume stacks . . . Acid storage tanks . . . Piping . . . Filter presses . . . Storage tanks for wash solutions . . . Centrifuges . . . Vacuum wash tanks . . . Bleaching tanks . . . Adaptors . . . Ductwork . . .

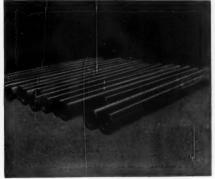
# **HERESITE** Provides

Protection of Metal Machine Parts

Production Free from Contamination



HERESITE COATED FANS AND BLOWERS SAFELY EXHAUST ANY CONCENTRATION OF ACID FUMES. THE COATING RESISTS CONDITIONS THAT WOULD ATTACK EVEN SPECIAL ALLOY METALS.



VALVES, PIPE LINES, PUMPS, SPOOLS, ETC. RE-QUIRE HERESITE PROTEC-TION FOR LONG TROUBLE-ERFE SERVICE



SOLUTIONS STORED IN HERESITE LINED TANKS ARE MAINTAINED FREE FROM CONTAMINATION AND CANNOT DISCOLOR THE SPINNING BATH SOLUTION.

# HERESITE & CHEMICAL COMPANY-

MANITOWOC, WISCONSIN

Eastern Division: 546 South Avenue, Garwood, N. J.

GUIDES for Doublers

GIVE YOU: NO POINT OF SUDDEN FAILURE LONGER LIFE • HIGHER SPEEDS • HIGHER TENSIONS NO SECONDS DUE TO UNDETECTED GUIDE FAILURE LOWEST GUIDE COST PER POUND OF YARN PROCESS

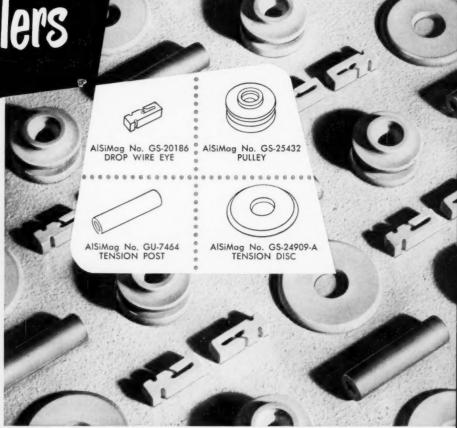
These hard, homogeneous AlSiMag guides permit you to run abrasive yarns at high speeds and high tensions. These guides are so hard that wear is very gradual. Since the material is homogeneous it has no surface "skin" to wear through and cause undetected yarn damage.

These AlSiMag guides have been used for many years by mills all over the country. Everywhere that cost figures have been made available to us, these guides have shown far longer life and their cost has been lower per pound of yarn processed.

If your process would be improved by a special guide, we can make it to your specifications.

Test samples of special designs can be made at reasonable cost without tool or die costs.

This enables you to try out your ideas with small investment.



THESE Alsimag Guides for Doublers are Standard Items AVAILABLE FROM STOCK. TEST SAMPLES ON REQUEST.

Many mills have reported that it would be economically impossible to process synthetic yarns without these AlSiMag guides. Samples for tests will be sent without charge. Try these guides. Keep a record of costs and results. Let your own records tell the story.

55TH YEAR OF CERAMIC LEADERSHIP

# AMERICAN LAVA CORPORATION

A Subsidiary of Minnesota Mining and Manufacturing Company

CHATTANOOGA 5, TENNESSEE

SALES ENGINEERS: Chattanooga, Tenn. • Cranston, R. I. • Dallas, Tex. • Greenville, S. C. • Livingston, N. J. • Los Angeles, Cal. • St. Paul, Minn. • S. San Francisco, Cal. REPRESENTATIVES: CANADA: Ian M. Haldane & Co., P. O. Box 54, London, Ont. ALL OTHER COUNTRIES: Minnesota Mining & Mfg. Co., Internat'l. Div., St. Paul 6, Minn.